MOTOR AGE

JUNE 1948

A CHILTON PUBLICATION

R v.62 June - Nov. 1948

HERE'S THE *Sure Way* TO GET MORE BUSINESS

The Hastings Performance Spot Check is a tested campaign to boost repair shop business in all lines.

It offers your customers, without charge, a professional motor check-up. Spot Check is built around simple, but effective inspections that produce an overall picture of the car's condition.

Spot Check pays off for Hastings dealers. It builds customer good will . . . it reveals the need for service and parts . . . brings in new customers.

Ask your Hastings Jobber-salesman to show you how to get more business of all kinds and make money with Hastings Spot Check.

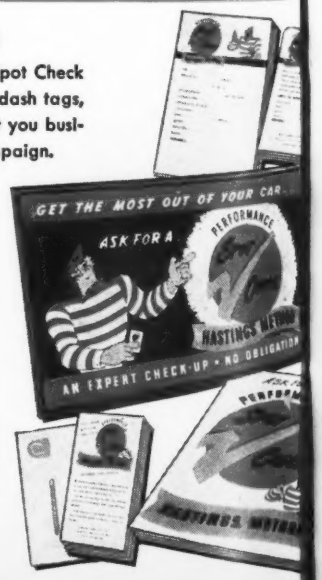
HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
HASTINGS LTD., TORONTO
U. S. PAT. 2,148,997

NATIONALLY ADVERTISED

Repairmen using Spot Check have the power of The Saturday Evening Post, Country Gentleman, Popular Mechanics, Successful Farming and Progressive Farmer behind their personalized merchandising program.

SPOT CHECK PROMOTION

Here is a complete merchandising plan. Spot Check electric signs, posters, Spot Check forms, dash tags, direct mail—everything is supplied to get you business in Hastings' great service-selling campaign.



HASTINGS

STEEL-VENT PISTON RINGS

Tough on oil pumping · Gentle on cylinder walls

Tech

The THREE NECESSITIES

. . . . FOR LEAK-PROOF, PRESSURE-TIGHT UNIONS

FORM-A-GASKET No. 1 (a paste) sets fast but not too fast for use on large surfaces. It dries hard but does not become brittle. It's a swell product for making pressure-tight, leak-proof unions . . . even when the surfaces are warped.

FORM-A-GASKET No. 2 (a paste) sets slower than No. 1. It dries to a tough, pliable layer with plenty of "cushion." It resists high pressures, continual vibrations and disassembles very easily.

AVIATION FORM-A-GASKET No. 3 (a brushable, self-leveling liquid) sets into position and dries to a tacky paste. It will not run, even when heated to 400° F. . . . nor will it become hard or brittle down to 70° F. below. Especially useful on threaded pipe and rubber hose connections. Prevents corrosion and cylinder head seizure.

ALL TYPES OF FORM-A-GASKET PRESERVE ALL TYPES OF GASKETS!

PERMATEX COMPANY, INC., BROOKLYN 29, N. Y.

MARFAK *lube tickets are my meal-tickets!"*

ONCE A CAR-OWNER discovers what a pleasure it is to drive his car after it has had Marfak chassis lubrication, he's sold on it *for keeps*. And what's more, he comes back for other profitable supplies and services you sell. He becomes a *regular* customer—and *regular* customers are what all dealers want. They spell *extra* profits!

More and more motorists are asking for this special Texaco chassis lubricant by *name*. They learn about Marfak from other enthusiastic users. They read about it in the color ads in the leading national magazines. They hear about it on the coast-to-coast Wednesday night radio program, *Texaco Star Theater*.

Don't miss this opportunity for building up your lube business and getting those *extra* profits from regular customers. *Talk to your Texaco representative today; phone the nearest of more than 2500 Texaco Distributing Plants; or write to The Texas Company, 135 East 42nd St., New York 17, N. Y.*

THE TEXAS COMPANY

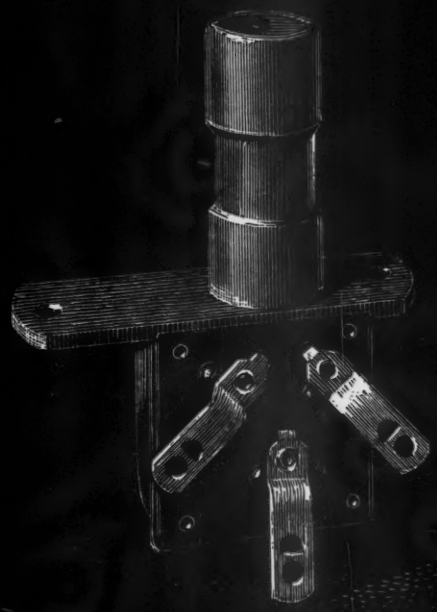
TEXACO

MARFAK Lubrication

You can make more money with

TUNE IN... TEXACO STAR THEATER every Wednesday night featuring Gordon MacRae and Evelyn Knight. See newspaper for time and station.

BLUE STREAK



A Blue Streak dimmer switch doesn't need nine lives. In a laboratory test, this fellow stood up for what amounts to 14 years of constant service . . . which is one long, useful life for a dimmer switch. You couldn't ask for more.

No other dimmer switch could take that grind, simply because no other switch is made like a Blue Streak. Down below the floor boards, where they sit, they take duckings in mud puddles and snowdrifts. But the Blue Streak switch is sealed tight-as-a-diver's helmet against water and moisture.

Naturally, a dimmer switch built for such service costs a few pennies more . . . a few pennies more for years more service . . . a few pennies more for quality that brings credit to your name and customers to your shop. Next time you're at your jobber's, put in a supply.

better your business... ***buy Blue Streak***

STANDARD MOTOR PRODUCTS, INC., LONG ISLAND CITY 1, NEW YORK

MOTOR AGE, Vol. LXVII, No. 7. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second-Class Matter December 27, 1935, at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. In case of Non-Delivery Return Postage Guaranteed. Subscription price: United States, Mexico, United States Possessions, and all Latin-American countries, $3.00 per year. Canadian and foreign, $5.00 per year; single copies, 40 cents.

Every Car—every Truck a Prospect for the sensational New DELCO AUTO RADIO with ELECTRO-TUNER Control

NO RE-TUNING FROM CITY TO CITY COUNTY TO COUNTY STATE TO STATE

Here is the FIRST and ONLY truly automatic tuning—no pre-setting, no push buttons or push bars—stations are "trapped" one by one, at the touch of a finger!

This is truly *advanced electronics*—'way ahead of the parade—no car or truck yet has it as standard equipment—the field is wide open!

Safest and Best

Cross-country truck drivers, salesmen and tourists can get the best broadcasts in any and all areas by merely touching the tuner—there's no taking the eyes off the road or fumbling with dials or push buttons!

This is the set they *want*. This is the set they'll *buy*—when you bring it to their attention!

No other auto radio has the engineering features, the sales features and the installation features of the new Delco! No other radio can be installed on *any* car or *any* truck with as much ease as the new Delco!

Easily Transferred

And no other radio can be transferred car-to-car or truck-to-truck, as easily and as quickly as the new Delco!

These features, in addition to the *exclusive* Electro-Tuner control which eliminates all pre-tuning, all push buttons, all dial fumbling, makes the new Delco the most desirable of all auto radios.

And, as such, it is currently the hottest item in the dealer's accessory line! See your nearest United Motors distributor or zone office AT ONCE and get in on the profits!

UNITED SERVICE MOTORS

DELCO RADIO

A GENERAL MOTORS PRODUCT

Delco Radios are distributed nationally by United Motors Service. See your United Motors distributor about the Delco radio line.

FULL POWER PERFORMANCE

BACKED BY 10,000 MILE GUARANTEE

The outstanding features of the Moog X-Plus Steel Oil Piston Ring and the successful results in reconditioning worn motors has brought FULL POWER performance that can be backed by a liberal guarantee.

Note the battleship oil ports that drain off excess oil; the continuous channel that meters the lubrication; the steel segments that act as sled runners to guide the piston and eliminate break-in running; and the Moog inner-ring that stabilizes piston action.

These features contribute to the FULL-POWER performance that car owners desire. Ask us for the FULL-POWER story and about our Labor and Ring Guarantee.

THE MOOG DYNAMIZER RESTORES COLLAPSED PISTONS

Moog distributors can re-size all types of collapsed pistons to normal size, efficiently and permanently by the revolutionary Moog Piston Expanding Method.

MOOG PISTON RING COMPANY
Division: MOOG INDUSTRIES, INC
ST. LOUIS 14, MO.

Moog—A Great Name in Automotive Maintenance

COPYRIGHT 1948 M. I. I.

NO CAR OR TRUCK SHOULD BE WITHOUT ONE

Smaller than your fist—but what a BIG job it does! New double action Airtex gasoline Filter-Dampers provide foolproof "trouble-insurance" against carburetor clogging and flooding . . . makes engines purr with new-found satisfaction. Win new customers and please old ones with the most revolutionary gasoline filter on the market!

- Removes dirt, lint, water, abrasive particles and other foreign matter from the gasoline.
- Acts as a shock absorber in the fuel line, overcoming fuel pump pressure pulsations and delivering an *even, smooth* flow of fuel to the carburetor.
- The ONLY filter on the market with a PULSATION-DAMPER, self-cleaning action and porous metal filtering element.

ORDER FROM YOUR JOBBER TODAY!

Sell an Airtex Gasoline Filter-Damper with Every Carburetor or Fuel Pump Job!

AIRTEX

GASOLINE FILTER with Pulsation DAMPER

AIRTEX AUTOMOTIVE DIVISION Chefford Master Mfg. Co., Inc. Fairfield, Illinois

Yes . . . "HEAT-SHAPED!" And that's very important. Why? Because, with "Heat-Shaped" piston rings, you can count more surely on correct shape and tension to seal the cylinders, to keep wear at the minimum, and to last for extra miles. You satisfy your customers with more power and better oil and gas economy.

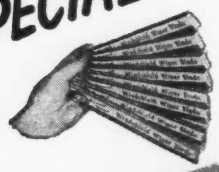
Your expert workmanship and *Pedrick* "Heat-Shaped" piston rings are an unbeatable combination. Put them together in every engine job and build your reputation and your profit. WILKENING MANUFACTURING CO., Philadelphia 42, Pa. *In Canada:* Wilkening Manufacturing Co. (Canada) Ltd., Toronto. *For 28 years, supplier of piston rings to leading vehicle and engine manufacturers.*

Pedrick Franchise Dealers

Get the best piston rings, complete service information, tested local sales aids, big outdoor shop sign, national magazine advertising. Ask your Pedrick jobber.

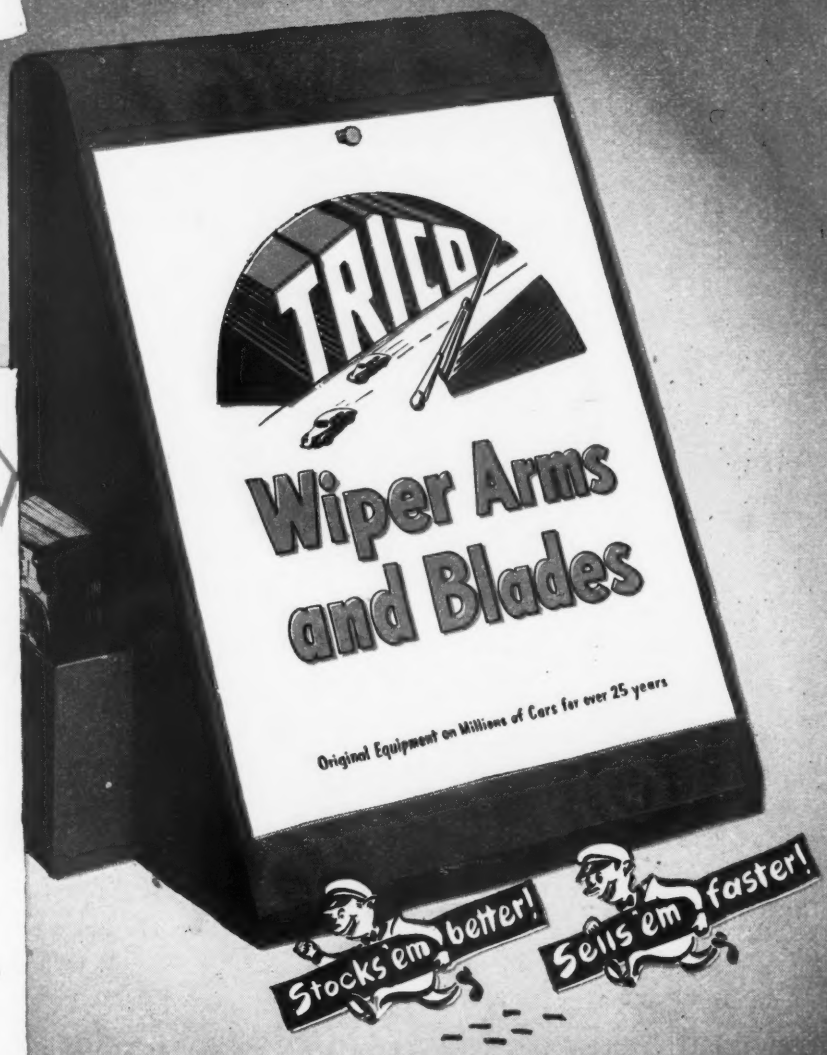
ONLY Pedrick® PISTON RINGS ARE "HEAT-SHAPED"

-and it's a SPECIAL DEAL*



Trico's New Cabinet
with the Cartridge Refill

*You can put this new Trico profit-maker to work AT NO COST. The original assortment contains extra "bonus" blades which, when sold, repay the small initial outlay.

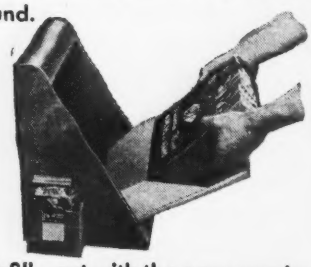


● You can be proud of the modern, distinctive design of this rugged, cabinet. Cover displays brilliant red, white and black Trico trademark. Despite large capacity, cabinet occupies only 12" x 13½" of space. Original assortment contains 40 Blades and 8 Arms, Plus 8 "bonus" Blades.

● Plenty of room in back compartment for excess stock, extra parts, extra maps.

Gleaming, easy-to wipe surface

● The right Blade or Arm for nearly any make, any year, of car right where you can SEE it without fumbling, without poking around.



● Refill...out with the near-empty container; in with a completely stocked new assortment!

● On the counter! On the wall! In the window! This handsome, new eye-catching Trico Cabinet steps up sales *wherever* you display it.

You've never seen one like it! When you tilt the door, the complete Blade and Arm assortment tilts with it. No pawing or poking. One look...and you've picked out the size of Blade or Arm your customer needs.

When sales nearly empty it, lift out the old container, slide in a new.

Remember, there's a bigger margin than ever on Trico Blades and Arms...and the biggest advertising campaign in Trico history is pyramiding public demand.

Your jobber's stock will be limited at first. Get *your* order in early.

TRICO *Windshield Wipers*

TRICO PRODUCTS CORPORATION, BUFFALO 3, N. Y.

Grey-Rock *Right Again* for '48!

BALANCED BRAKE LININGS

Right for you.

Right for your customers.

Right because there are not just 1 or 2, but many different types of linings factory engineered and packaged in combinations to give quick, quiet, smooth, *Balanced* stops . . . and long wear.

Right because they eliminate costly "comebacks."

Right because they're clearly marked for make and model on every box.

Right because they're known through big, colorful ads regularly in

POST • COLLIER'S • HOLIDAY

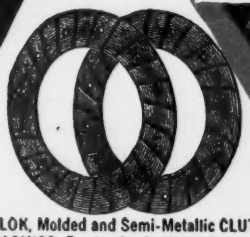
See your GREY-ROCK jobber for Balanced Brake Linings for cars, trucks, and buses . . . sets for Bonding . . . GREY-ROCK Brake Servicing information, based on National Safety Council standards.

BALANCED BRAKSETS. Packaged drilled, or plain for bonding, for all passenger cars.

BALANCED TRUCKSETS for light and medium trucks packaged drilled (and popular numbers plain for bonding).

BOLT-ON BLOCKS. For Heavy-Duty Buses, Trucks, and Trailers.

STANDARD SETS GREY-ROCK quality Wvrbac linings



VEE-LOK, Molded and Semi-Metallic CLUTCH FACINGS. For trucks, buses and cars.

FAN BELTS

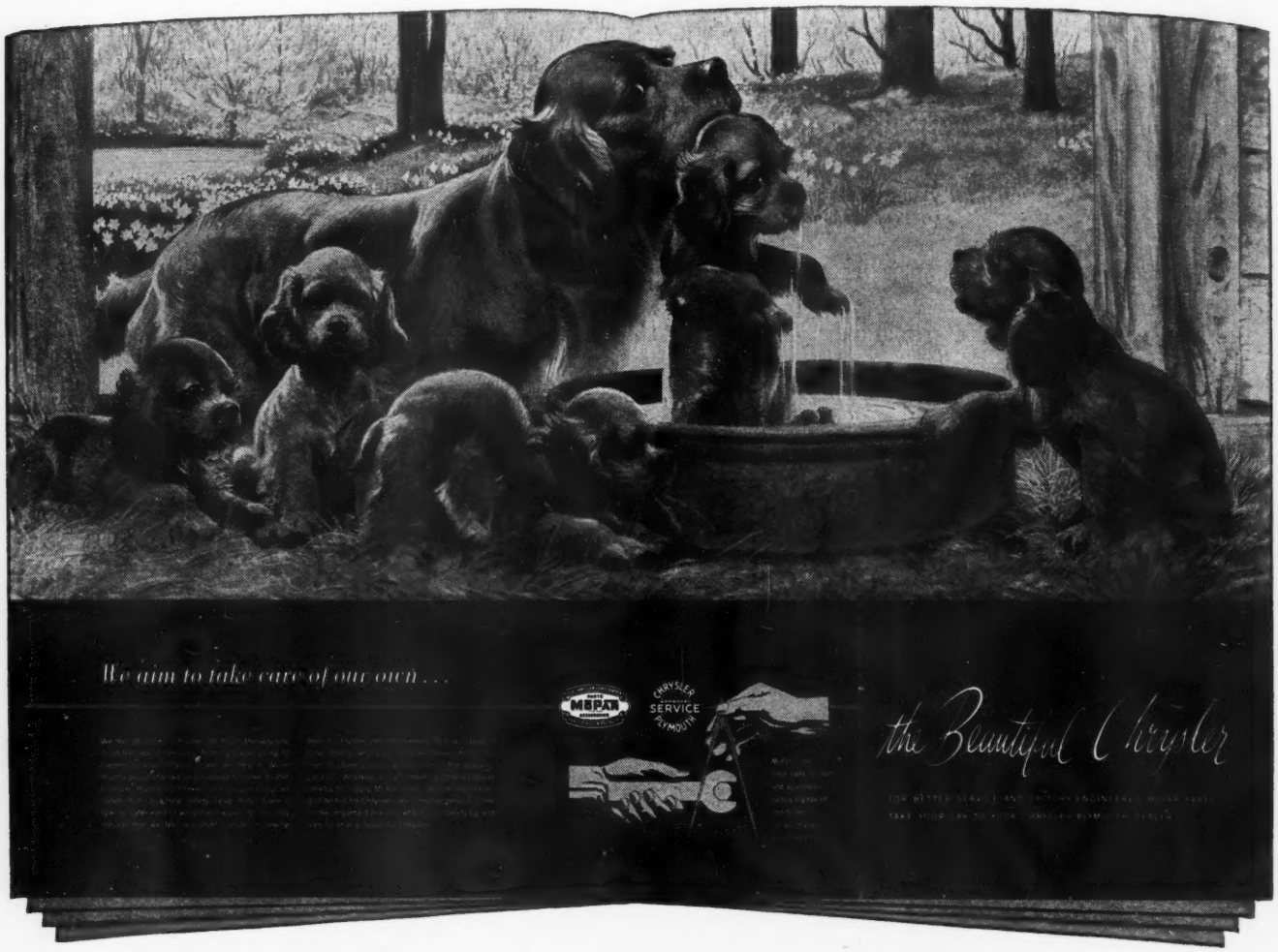
RADIATOR HOSE

UNITED STATES ASBESTOS DIVISION
of Raybestos-Manhattan, Inc.,
MANHEIM, PA.

Chrysler

backs its dealers

with another great four-color center spread in national magazines reaching 52,745,857 readers



"This is *service* advertising with an important difference. It puts Chrysler service on a warm and friendly basis, gives the car owner a real reason why both Chrysler and the Chrysler dealer take continuing pride in the fine performance of the Chrysler car. It buys good will for the Chrysler-Plymouth dealer while selling the excellence of his service facilities. It builds the name MōPār and it means business. The impact on the public has been terrific—and no wonder, there's never been a service campaign that has caused thousands of people to write in for reprints."

in Original
Factory-Equipment Choice

More than 50% of all cars and trucks built during the past 10 production years have been factory-equipped with AC Spark Plugs. The choice of responsible engineers is your assurance of utmost reliability and top performance.

You can continue to have such reliability and performance by buying AC—the original factory-equipment choice in spark plugs.

Reproduced from Current National Advertising

AC's new *patented* aluminum oxide insulator material has revolutionized spark plug performance to a degree that no car, truck or tractor owner can afford to overlook. That means profits for you. There will be a big demand for these new AC's. They're self-cleaning — resistant to oxide coating — and they save time, maintenance and plug cost. Get a supply from your AC wholesaler.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

"We can't p

The
Original Equipment
Line

t praise Sta-ful enough"

E. M. SHEEHAN
Motive Parts Co. of Pa.
Pittsburgh, Pa.

CHARLES M. SCHLEICHER
Superior Auto Repair
Swissvale, Pa.

" 'It was a great day when we found out about Sta-ful. It's a battery unmatched by competition. And the Auto-Lite advertising on the radio and in the magazines makes it easy to sell. It's great to have the battery car owners really want.' This statement of Swissvale dealer Charles M. Schleicher is typical of the way our dealers praise the Auto-Lite Sta-ful Battery." E. M. Sheehan, Motive Parts Co. of Pa., Pittsburgh, Pa.

HERE'S WHAT Sta-ful DOES FOR YOU

1 Gives you a real sales leader . . . a battery that needs water only 3 times a year in normal car use.

2 Turns in a sweet profit on every sale.

3 Reduces time and bother required for checking and servicing batteries.

4 Wins friends, boosts sales all along the line because the Sta-ful principle helps end a major cause of battery grief and failure.

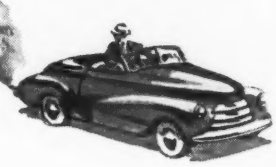
AUTO-LITE MEANS PRECISION MANUFACTURING

PERFORMANCE GOES UP IN SMOKE . . .

"Drop the extinguisher, Joe . . .

he needs

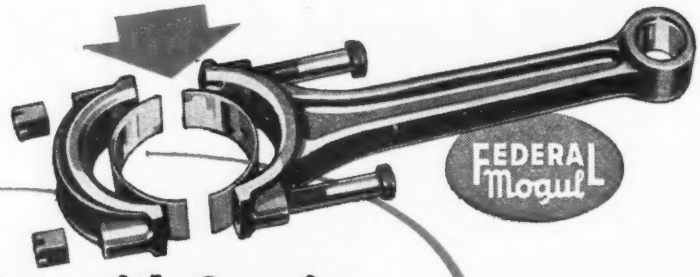
FEDERAL-MOGUL ENGINE BEARINGS"



WORN CONNECTING ROD BEARINGS CAUSE OIL PUMPING

Heavy exhaust smoke means oil pumping, which begins with worn engine bearings. Excess oil enters combustion chambers, burns to carbon, steals power. To check oil pumping and restore power, pep and economy, install *genuine* Federal-Mogul *Oil-Control* Bearings. *They're engineered for the job!*

FEDERAL-MOGUL SERVICE
DIVISION OF FEDERAL-MOGUL CORPORATION
COLDWATER, MICHIGAN



Replace in Sets with Genuine

FEDERAL-MOGUL

Oil-Control Bearings

The Complete Line—Almost 7,000 Numbers:

Engine Bearings • Bushings • Connecting Rod Exchange Service • Reconditioned Connecting Rods • Rebabbitted Connecting Rods • Connecting Rod Bolts and Nuts • Bearing Metals • Laminated Shims • Solders.

New and Better!

Grote

FLAMELESS FLARES

New space saving design — more compact — sturdier construction — shatterproof Plexiglas reflectors that are visible for half a mile — carrying case with locking handle can be mounted on vehicle — meets I.C.C. regulations for all commercial vehicles . . . that's the new Grote Flameless Reflector Flare. It is always ready for instant use. No filling, no wicks or fuel. No failure of lamps, bulbs, batteries or switches — no dangerous fuses or flame. Just open the handy container, set out the flares and be safe at any stop with the brightest spot on the road.

New Low Price!

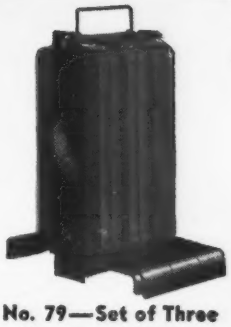
Here's the lowest price in history for the most effective flare in the industry.

$9.50 LIST

Set of 3 with Carrier — Flags Extra

SET OF THREE IN CONVENIENT RACK

Only a small space required for storage in trunk or tool compartment for this compact set of flares — or the rack can be permanently attached to any convenient but out-of-the-way place in the vehicle. Can be padlocked to prevent pilferage — and opened in an instant for emergency use. The entire set of three is light weight and sturdy — nothing to wear, break or get out of order — all parts rust resistant and weather-proof — good for a lifetime of use.



No. 79 — Set of Three Flares and Carrier

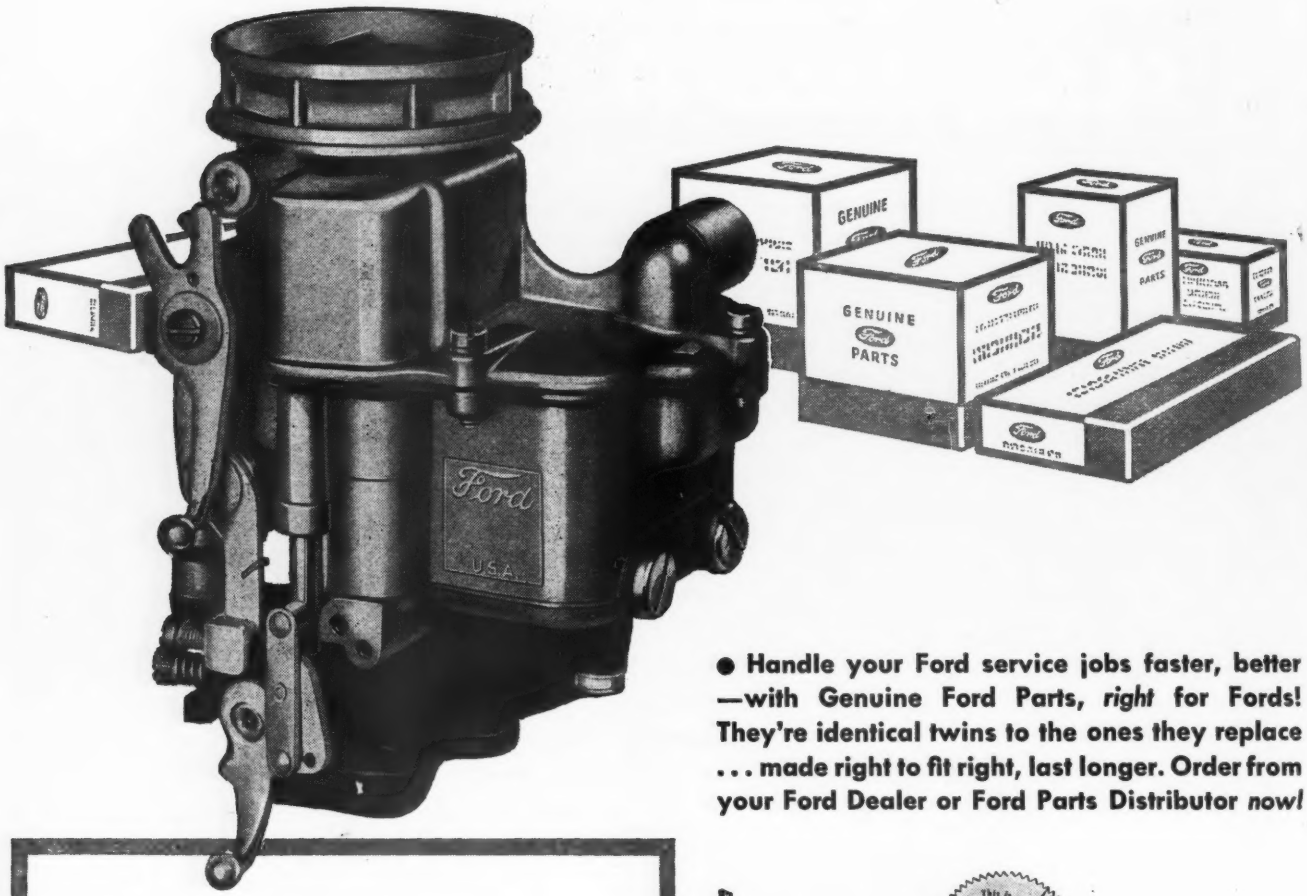
Each side panel is equipped with two 3" reflectors of shatterproof, permanently brilliant, Plexiglas. Reflectors will not shatter, crack, shrink or fade. Built-in flag holder. Flags can be supplied at small extra cost. Heavy swivel legs make a sturdy base that will not blow over in a 40-mile wind.

Grote — the Brightest Spot on the Road

ORDER FROM YOUR JOBBER — TODAY!

GROTE MANUFACTURING CO., INC. BELLEVUE KENTUCKY U.S.A.

Get MORE Ford Service Business . . .
Stock Genuine Ford Parts



● **Handle your Ford service jobs faster, better —with Genuine Ford Parts, *right* for Fords! They're identical twins to the ones they replace . . . made right to fit right, last longer. Order from your Ford Dealer or Ford Parts Distributor *now!***

Genuine New Ford Carburetor

Comes completely assembled, ready for quick installation. Assure customer satisfaction by installing complete unit. Dual down-draft type gives proper mixture ratio, top economy. Balanced to compensate for variable restrictions in the air cleaner. Accelerating pump for fast pick-up, with three-position seasonal adjustment.

Genuine Ford Parts...
Right For FORDS!

Independent Garages —this "sign of good business" tells the town you stock Genuine Ford Parts, brings in more new customers. And the Genuine Ford Parts Seal assures your Ford customers that Genuine Ford Parts have been used on their jobs. That builds customer satisfaction! Your Ford Dealer or Parts Distributor has the full story on how you can qualify to use these two great business builders. See him today!

F O R D M O T O R C O M P A N Y

NOW!

Pay your men a cash bonus at our expense on MOTOR RYTHM sales!

Look at this!

DEAL NO. 48-N

You buy	40—four ounce cans . . Your cost	$4.80
We give you	8—four ounce cans . . . Retail	1.60

DEAL NO. 48-P

You buy	40—pint cans . . . . . Your cost	$18.00
We give you	8—pint cans . . . . . Retail	6.00

DEAL NO. 48-R

You buy	20—quart cans . . . . . Your cost	$15.00
We give you	4—quart cans . . . . . Retail	5.00

It's easy to see that what you don't pay for will more than pay that cash bonus!

Now you can give your attendants, service men, and salesmen a real incentive —*cash*—for pushing Motor Rythm sales! *At our expense,* you can pay three cents *cash bonus* for every four-ounce can sold . . . ten cents *cash bonus* for every pint sold . . . twenty cents *cash bonus* for every quart sold!

We repeat—*we* stand the cost of this great new volume-building, profit-increasing plan! *You* still get better than 52% mark-up profit—*on a bigger volume of business.* Act now! See your Whiz jobber for all the details. *R. M. Hollingshead Corporation. General Offices: Camden, New Jersey. Canadian Offices: Toronto. Warehouses: Dallas, San Francisco, Chicago.*

Whiz

PRODUCTS OF
Hollingshead
LEADER IN MAINTENANCE CHEMICALS

DETROIT PUBLIC LIBRARY

The Only
Tire Franchise
INLAND
HEAVY SERVICE
INLAND
TIRES
Take to the Road
Four-color metal signs identify Inland Franchised Dealers.
INLAND RUBBER

That Makes YOU The Boss!

YOU Give a 15-month Warranty

The strongest, fairest tire warranty in America! No mileage limit. Tailor-made for the independent dealer. Keeps you a jump ahead of competition with a first line tire PLUS an ironclad warranty and adjustment plan.

YOU Make on-the-spot Adjustments!

You're the boss! No delay . . . no red tape. You make adjustments in a matter of minutes . . . that cost you nothing . . . keep your customers happy.

More built-in mileage with Cool Twist* rayon cord . . . Inland's specially treated cord that fights heat.

Safety-sure, quick-stop 8-rib tread . . scientifically engineered with more than 2750 road gripping, speed-breaking surfaces.

Tough, live-rubber carcass . . . extra strong and husky -- resists cuts and bruises.

Extra riding comfort for thousands upon thousands of cool-running, blowout-free miles.

Full range of popular passenger and truck sizes--black and white sidewalls. Complete stock of all sizes for quick delivery—at your automotive distributor.

* T. M. Inland Rubber Corporation

FIND OUT TODAY HOW YOU CAN MAKE MONEY WITH AN INLAND FRANCHISE

CORPORATION Tire Builders Since 1913

INLAND

INLAND RUBBER CORPORATION
146 W. 27th Street, Dept. M46 Chicago, 16, Illinois

Please send me complete details about the new Inland Franchise opportunity.

NAME _____

ADDRESS _____

TOWN _____

WEIDENHOFF

Model 1044 Battery Operated Analyzer

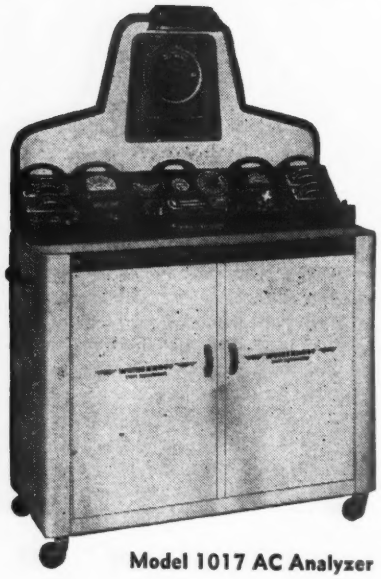
STEPS UP YOUR TUNE-UP PROFITS

Years of perfecting places in your hands the finest most accurate equipment that lets you do all tune-up work right the first time. Accuracy is the keynote of WEIDENHOFF analyzers — Model 1017 and 1044 (the latter with extension lead block).

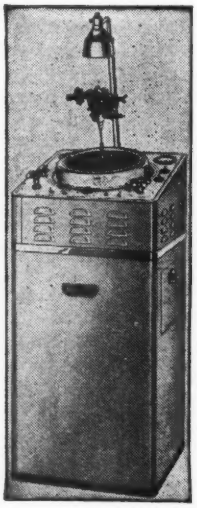
And, for ignition distributor testing the famous Weidenhoff Model 1059 Distrib-U-Scope satisfies the most exacting service expert. Gives you an electrical picture of distributor performance right before your eyes. It's the only way you'll know the distributor will be up to manufacturer's standards when you re-install it on the engine.

WEIDENHOFF has been the standard of accuracy and quality in test equipment for over 30 years.

Write for the facts on the full line for your shop.



Model 1017 AC Analyzer



Model 1059 Distrib-U-Scope. Left—mounted on cabinet furnished optional.

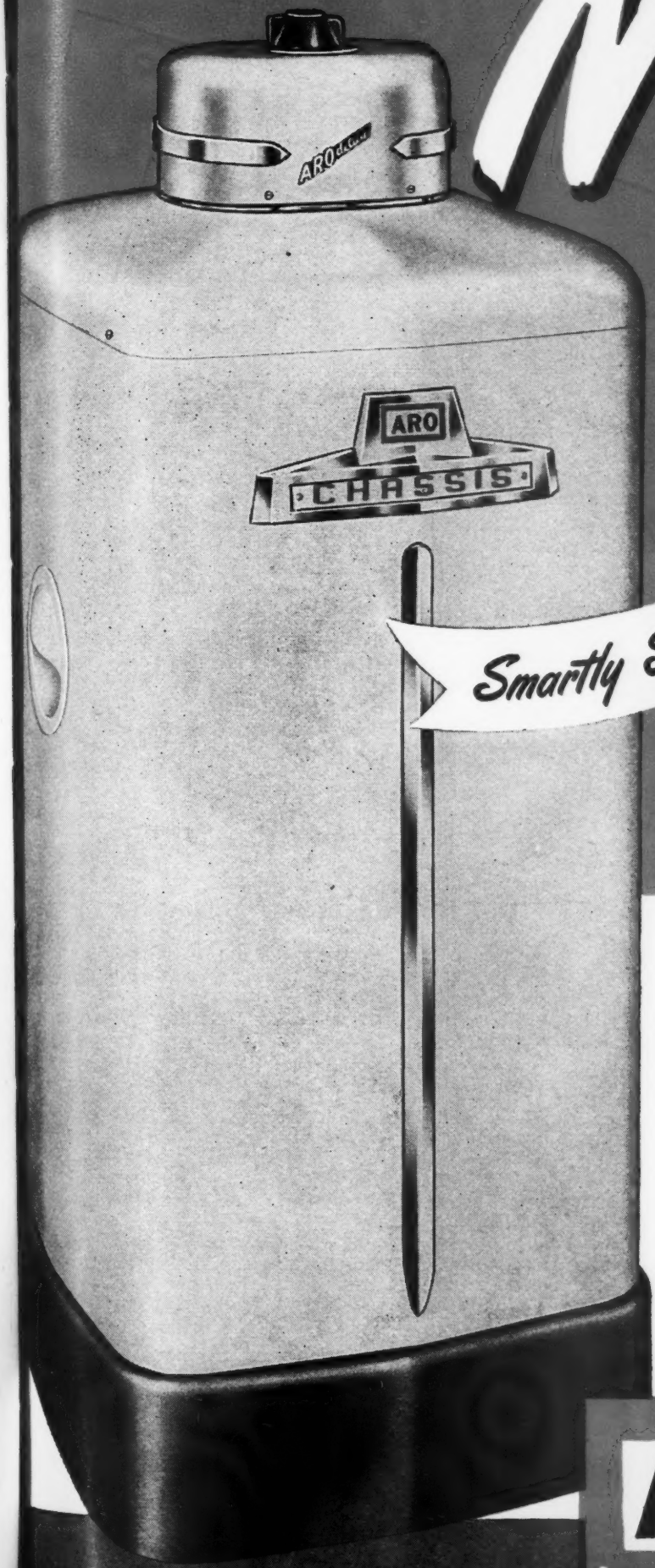
AUTOMOTIVE SERVICE WEIDENHOFF EQUIPMENT AVIATION

JOSEPH **WEIDENHOFF** INC.

SUBSIDIARY OF BOWSER, INC.

4344-58 West Roosevelt Rd., Chicago 24, Ill., U. S. A.

EQUIPMENT for BATTERY ENGINE TUNE-UP ELECTRICAL MAGNETO SERVICE



NEW...

ARO *Deluxe* LUBRICATORS

...Proven Performance

Smartly Styled

Now . . . "that new look" combined with brilliant performance in the new ARO Deluxe line of Lubricators . . . help you "get on the super highway" to lube department *sales* and *profits!*

Here's *new beauty* that gives your establishment new customer appeal and rings the cash register! *New labor-saving features* that help you do a better job, save time and cut costs! Plus Aro-engineered and Aro-built dependability. See your Aro Jobber for full details . . . or write for literature. The Aro Equipment Corporation, Bryan, Ohio.

Specify

ARO

LUBE EQUIPMENT AND AIR TOOLS FOR AUTOMOTIVE SERVICE... INDUSTRY...FARM

You are invited to investigate the Profit Advantages of the Prest-o-Lite Hi-Level Battery

PREST-O-LITE BATTERY COMPANY, INC. • TOLEDO 1, OHIO

You add water

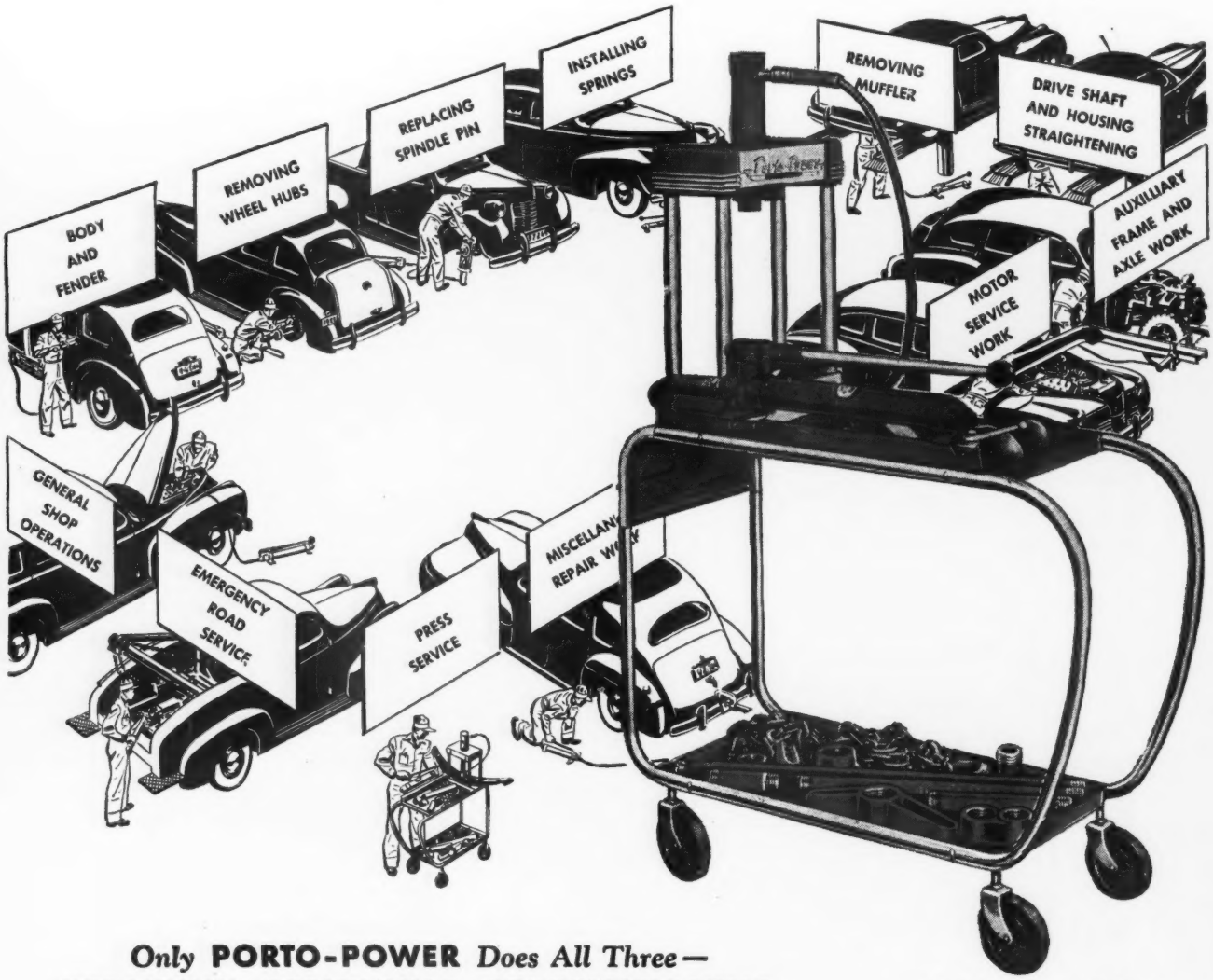
only 3 times a year... lasts longer too!

IN NORMAL CAR USE

Porto-Power*

IS A MONEY-MAKER

for your entire shop



Only PORTO-POWER *Does All Three—*
REPAIRING, REBUILDING, RECONDITIONING

Literally a miracle tool of 1001 uses, Porto-Power is a profit-maker for every department of your shop. Its exclusive and unmatched array of units and attachments adapt Porto-Power to every push, pull, bend, clamp, spread, lift and straightening operation. This "educated" hydraulic jack performs the basic operations of the human hand . . . but with TONS of power. No other unit, hydraulic or mechanical, offers you this complete money-making opportunity. Don't buy just a body jack, get Porto-Power, the tool that performs a complete range of shop operations. Order Porto-Power from your Blackhawk Jobber.

A Product of BLACKHAWK MFG. CO., Dept. P 668, Milwaukee 1, Wisconsin

THE HEART OF THE SHOP

Porto-Power* is Profit Power!

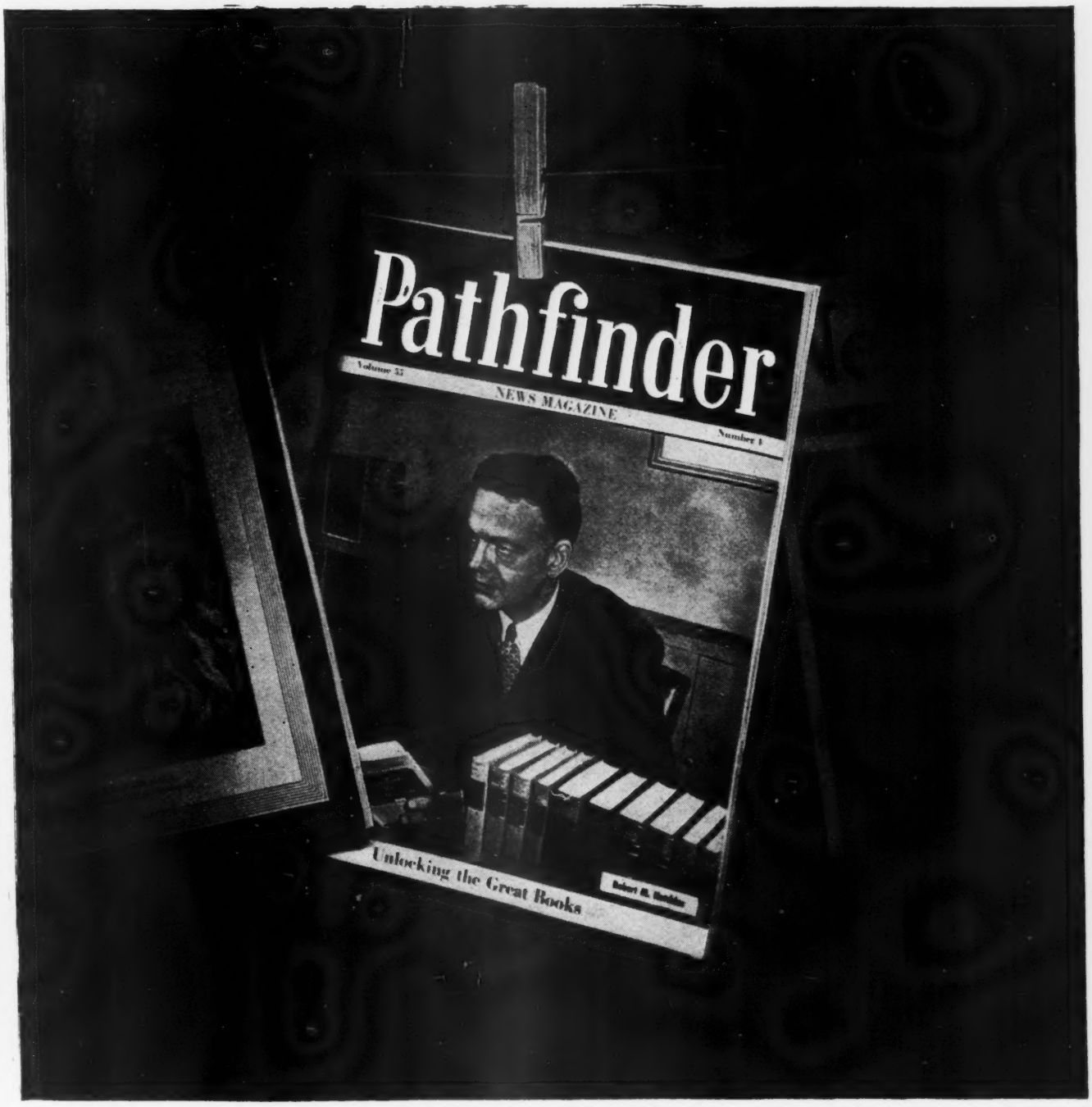
*Reg. U.S. Pat. Office

There is only one Porto-Power . . . it is made by

BLACKHAWK

America's Second Largest News Magazine!

OVER 1,000,000 CIRCULATION OF HOMETOWN LEADERS



Also publishers of FARM JOURNAL—*BIGGEST in the country*

QUIET PLEASE!

it's the "Buy Word" of the Muffler Business

GET BACK INTO SILENCER-SELLING ACTION WITH WALKER'S NEW BUSINESS-BOOSTING CAMPAIGN

● Here's a great money-making opportunity ready and waiting for you. It's pleasure-driving time again . . . time to replace noisy, wasteful, winter-worn mufflers with new Walker "Individually Tuned" Silencers.

And what a mess those old mufflers are—beaten and battered by winter's ice and snow . . . rusted and corroded by unevaporated acid-condensate . . . their "insides" collapsed and jumbled, causing high, power-wasting, gas-consuming back pressures. More mufflers need replacing in spring than at any other time of the year.

Here's your chance to bring your customers the freedom they seek from noise fatigue, the improved engine performance they need and the greater gasoline economy they want—with fast, easy, profitable Walker Silencer installations.

Get into the muffler money—with QUIET PLEASE. Your Walker Jobber salesman will tell you all about it.

WALKER MANUFACTURING COMPANY OF WISCONSIN • RACINE, WIS.
Also Makers of Walker Jacks and Electric Lifts

THE SATURDAY EVENING POST PRE-SELLS THEM FOR YOU

Spearhead of this great spring-summer Silencer drive is another action-compelling POST advertising campaign urging car owners everywhere to drive to their Authorized Walker Dealers for new, quiet, efficient Walker "Individually Tuned" Silencers.

YOUR SILENCER DISPLAY STAND IDENTIFIES YOU FOR THEM

Put this famous customer-catcher out where everybody can see that you're an Authorized Walker Dealer. Over 125 million impressions in 6 continuous years of POST advertising make it the most widely known and recognized trade-mark in the muffler business.

FOR FREEDOM FROM NOISE FATIGUE • FOR IMPROVED ENGINE PERFORMANCE
FOR GREATER GASOLINE ECONOMY

. . . don't say "Muffler" . . . say

WALKER SILENCERS "I.T." *makes the difference*

*"Individually Tuned" to each make and model of car

.005" to .010" clearances are required in brakes. ONLY the Barrett Brake Dokter can accomplish such a close, accurate fit. It automatically eliminates Side Pull, Grabbing, Diving, Chatter, etc.

NOTE:—Pre-ground relined or new shoes, no matter how accurate, *cannot* be adjusted for 100% lining-to-drum contact, due to warped backing plates and worn anchors which cause misalignment, unless ground in operating position.

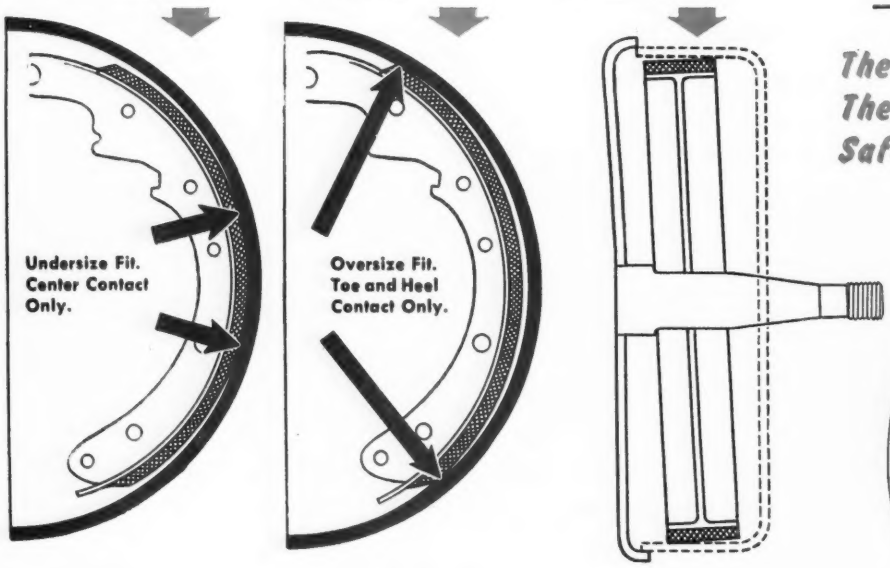
THE BARRETT BRAKE DOKTER

- ...Eliminates spongy and hard pedal.
- ...Corrects faults caused by bent, warped or improperly adjusted brake shoes.
- ...Produces 100% lining-to-drum contact.
- ...Makes wear-in period unnecessary.
- ...Insures longer lining life.
- ...Centralizes and adjusts brake shoes.
- ...Grinds lining to perfect drum arc with shoes in position on backing plate.
- ...Handles all brake shoe assemblies, 9" to 24" diameter.
- ...Does away with dummy drums, gauges and other gadgets.
- ...Requires only one mechanic to operate it —no special training needed.

No contact at heel and toe causes spongy pedal, squeals and excessive lining wear.

No center contact causes hard pedal, grabbing, chatter and cuts brake efficiency at least 50%.

Warped or bent backing plate throws shoes out of alignment causing vibration, brake drag and erratic brake action.



The Brake Dokter Method Is The Only Way To Insure Safe, Perfect Brakes!

The Brake Dokter is approved, used and recommended by all leading car, bus and truck manufacturers

Your Jobber Will Demonstrate On Your Toughest Job

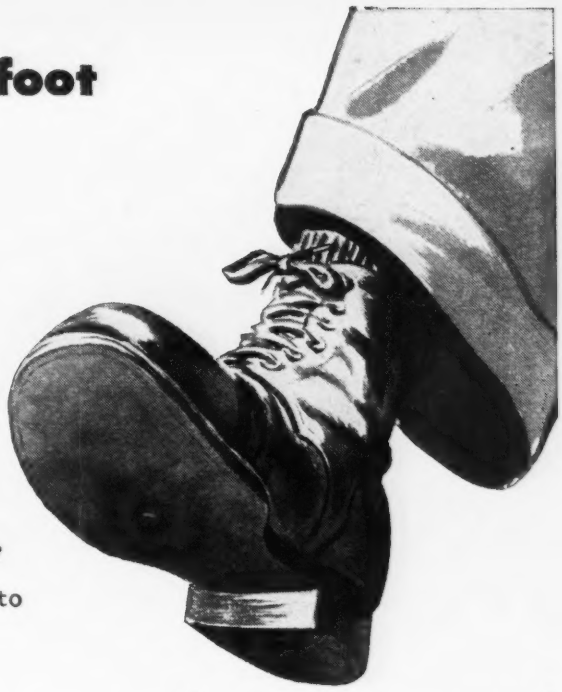
Or Write Us Direct

BARRETT EQUIPMENT CO.

The World's Finest Brake Service Equipment

TWENTY-FIRST AND CASS • ST. LOUIS 6, MO.

How to get off on the right foot with a customer...



STICK to the best in materials and workmanship and you'll make a hit with customers every time. You know that. You know it's the way to keep old friends and make new ones, too.

That's why it pays to make sure the "Timken" trade-mark is on every tapered roller bearing you install. Timken is the best-known name in bearings—thanks to consistent advertising and years of unbeatable performance. As a result, Timken bearings are *pre-sold!*

So remember—to turn customers into friends . . .

...Just tell 'em it's "TIMKEN"®

It's no wonder Timken tapered roller bearings are first choice on cars, busses and trucks! They take any combination of radial and thrust loads, eliminate friction, reduce wear, keep parts in rigid alignment, and normally outlast the vehicle itself!

The Timken Company is the only bearing manufacturer in America which makes its own steel. And it is the undisputed leader in: 1) advanced design, 2) precision manufacture, 3) rigid quality control, 4) special analysis steel.

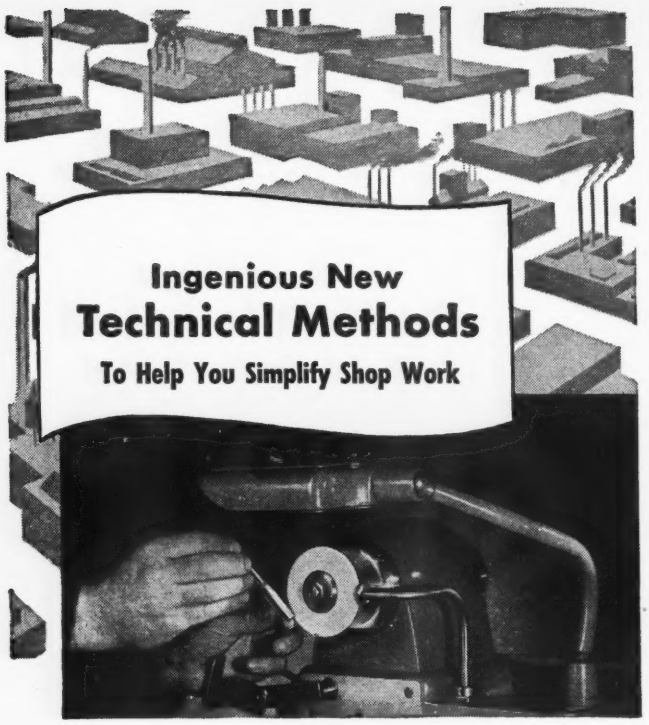
To guard your reputation for topnotch service, make sure the "Timken" trademark is on every tapered roller bearing you install. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

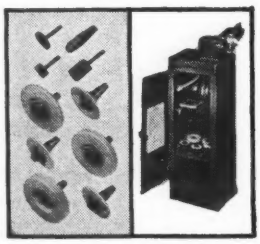
NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION



Versatile New Grinder Saves Time —Improves Grinding Efficiency

A new grinder, the Corlett-Turner G-3, permits changing of grinding wheels in a matter of seconds and assures a true running wheel at all times. Each wheel is individually mounted on a ground, tapered arbor.

Easy wheel changing is accomplished by a slight wrist motion on the end bells of the grinder head. A twist to the left releases the wheel arbor; the reverse action instantly secures it in place. It's all done in a matter of seconds. No costly time is lost in repeated wheel dressing.



Grinding Wheels — Corlett-Turner Grinder

In addition to its primary function, the G-3 grinder has innumerable uses for burring, buffing, polishing, and production applications requiring a high speed spindle. Powered by a 1/3 horsepower motor, a three-step pulley arrangement provides speeds of 5600, 8000, and 12,000 r.p.m.

Efficiency in precision work is also increased when tension is relieved by the act of chewing. And chewing Wrigley's Spearmint is a pleasant, easy way to help relieve workers' nervous tension. For these reasons Wrigley's Spearmint Chewing Gum is being made available more and more by plant owners everywhere.

Complete details may be obtained from Corlett-Turner Co., 1001 S. Kostner Ave. Chicago 24, Illinois

AC-67

MOTOR AGE

With Which Is Combined AUTOMOBILE TRADE JOURNAL

FOR AUTOMOTIVE SERVICEMEN

VOL. LXVII, No. 7 — June, 1948

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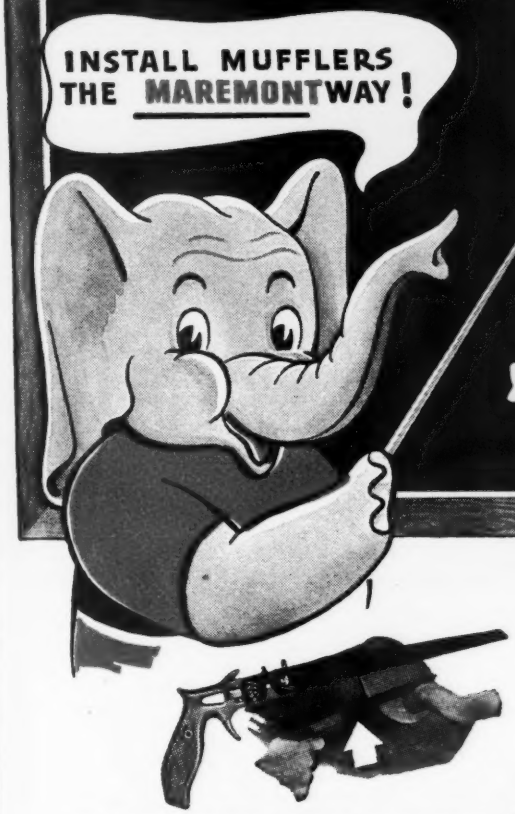
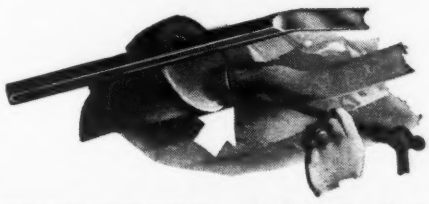
MAKE AN AVERAGE OF $10.28 PER HOUR!



AVERAGE PROFIT ON	
MUFFLERS	2.36
CLAMPS	.28
INSTALLATION	2.50
TOTAL PROFITS (For ½ Hour or Less)	$5.14

YOUR PROFIT PER HOUR $10.28

MAREMONT ALL-ANGLE STEEL SAW—*Speedily cuts through pipe or muffler tube. Blade is easily adjustable for cutting up or down. Extra blades available. Handy grip facilitates use. Difficult angles easily conquered.*



MAREMONT PIPE PEELER—*Peels back a clean, narrow strip. Quickly loosens stubborn or rust-tight connections. No jagged edges. Can be used on every muffler job. A few sharp blows with a hammer, and the job is done.*

Cut muffler installation time in half and double your profits—the MAREMONT way!

With MAREMONT'S special Muffler Removal Kit, no job takes more than ½-hour. You make an average of $10.28 per hour! AND besides giving your customers quicker service, you lessen danger of accidents, do a better job.

The MAREMONT Removal Kit consists of the PIPE PEELER and the ALL-ANGLE SAW. Made of fine quality, heat-tempered alloy steel, these valuable tools will give you many years of fine service. They're available to dealers at no extra cost.

See your distributor today. Cash in now on more muffler business!

Also manufacturers of Maremont Springs and Helper Springs

SINCE 1877

MAREMONT MUFFLERS

MAREMONT AUTOMOTIVE PRODUCTS, Inc.
1600 S. Ashland Avenue • Chicago 8, Illinois
Factories at Chicago, Cicero and Harvey, Illinois

NO USE HUNTING FURTHER...

Here's the best steel oil ring ever built!

SEALED POWER MD-50

The only ring with the Full-Flow Spring!

Sealed Power Franchised Dealers have the jump on competition! Car owners all want THAT NEW-CAR FEEL featured in Sealed Power National Advertising! Only Sealed Power offers the sensational new MD-50 Steel Oil Ring—the only ring with the Full-Flow Spring. Here are some of the advantages:

- Improved oil economy
- More spring action for steel segments
- Leaves all slots and oil holes open
- Maintains tension for varied groove depth
- Greater bearing area for longer life
- Retains original efficiency for life of ring

Sealed Power "X" Sets for all popular cars and trucks feature the MD-50 Steel Oil Ring—the only ring with the Full-Flow Spring. Backed by the best dealer franchise and the strongest selling program in the industry. Talk to your Sealed Power Distributor or write Sealed Power Corporation, Muskegon, Michigan. In Canada: Stratford, Ontario.

TWICE AS MANY SLOTS FOR FULL FLOW OF OIL

Through Ring

Through Spring

Through Oil Holes

GENTLE CURVES

INSTEAD OF HUMPS

for greater tension flexibility in tapered and out-of-round bores plus greater bearing area for longer spring and ring life.

Sealed Power

PISTON RINGS

BEST IN NEW CAR BEST IN OLD CARS!

MOTOR AGE
JUNE 1948

This, That and the Other

★ **DEFENSE PROGRAM**...First indication of the impact of the accelerated military defense program on the automotive industry is a report from Washington dealing with requests by the Army Ordnance Department for military and combat vehicles. According to the report, Army Ordnance had asked appropriation of $117,437,149 for new trucks, and $39,988,170 for spare parts. For combat vehicles the request was for $165,871,843, with an additional $72,656,525 for spare parts.

★ **EUROPEAN SMALL CARS**... European manufacturers of small economically operated automobiles are finding a ready market in this country, at least during the current shortage of domestic cars. Austin Motors officials have announced that their company will deliver 1,000 cars a month to the U. S. market for the balance of this year. For the home market in Great Britain—280 cars for the entire six months.

★ **USED CAR DEALER PROFITS**...Although there is no doubt that new car dealers are rolling up record profits, used car merchants apparently are not doing nearly so well, according to a study made by the Michigan Used Car Dealers Association. Most of its members are operating on a profit of from 4 to 10 per cent of sales before taxes.

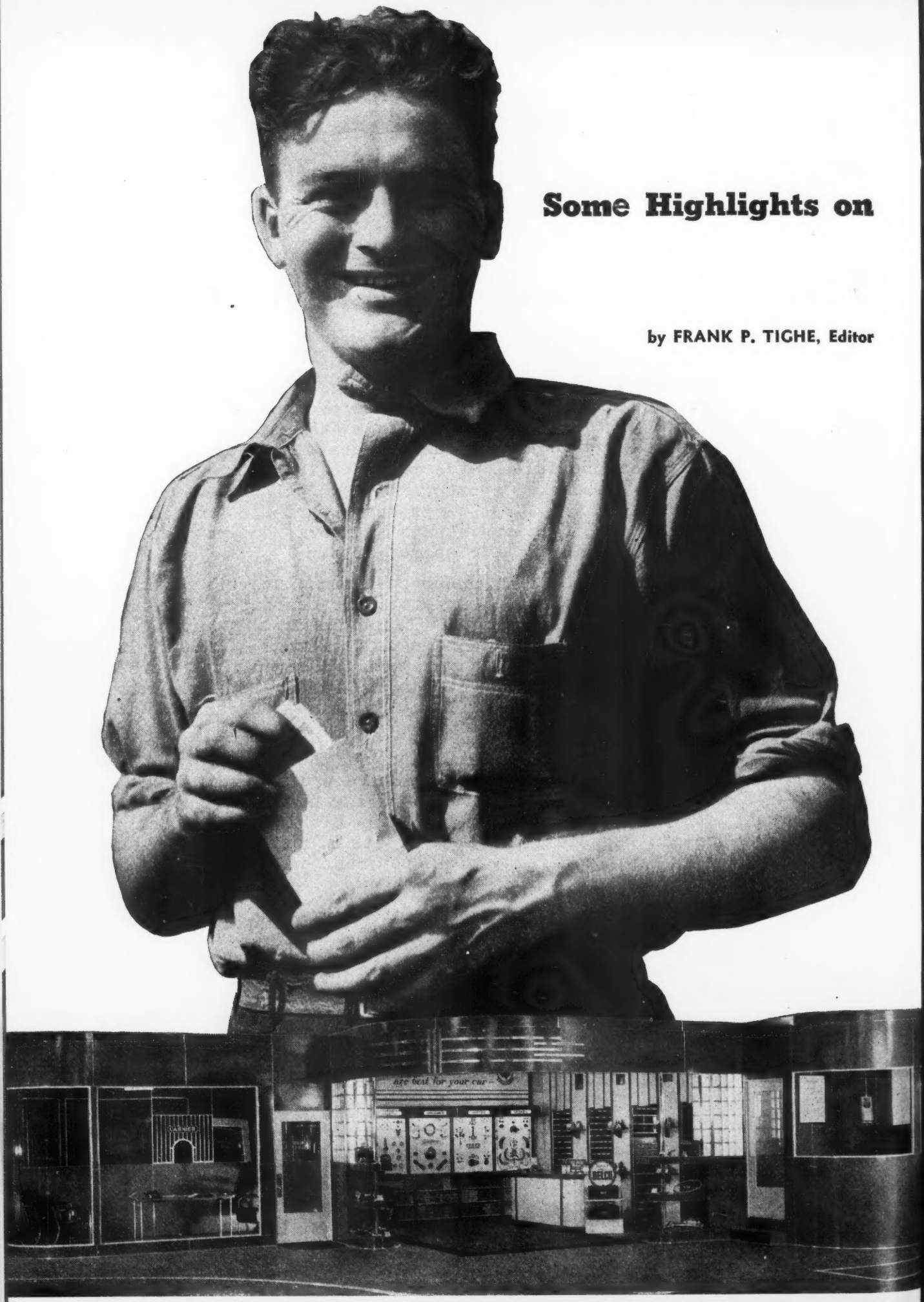
★ **100 MILLIONTH VEHICLE**... The automotive industry in the United States will build its 100 millionth vehicle within the next few weeks. It required 29 years to build the first 25 million vehicles, starting with the year 1896. The next 25 million were built between 1925 and 1931. The third 25 million were built between 1931 and 1939. Because of the war, nine years were required for the fourth 25 million, although actual production was accomplished in five years of civilian output.

Frank P. Tighe

EDITOR.

Some Highlights on

by FRANK P. TIGHE, Editor



Wages and Hours in Dealer Shops

Pennsylvania Automotive Association, largest state dealer organization conducts important survey among members on Employer-Employee Relations

WHILE take-home pay continues to be of great importance to the wage earner, recent surveys rank "a good job and interesting work" and job security well ahead of rate of pay.

Be that as it may, the Pennsylvania Automotive Association's Employer-Employee Relations Committee has contributed importantly in the study of Wages, Hours and Working Conditions in P. A. A. members' shops. These factors remain essential in keeping workers happy in their jobs.

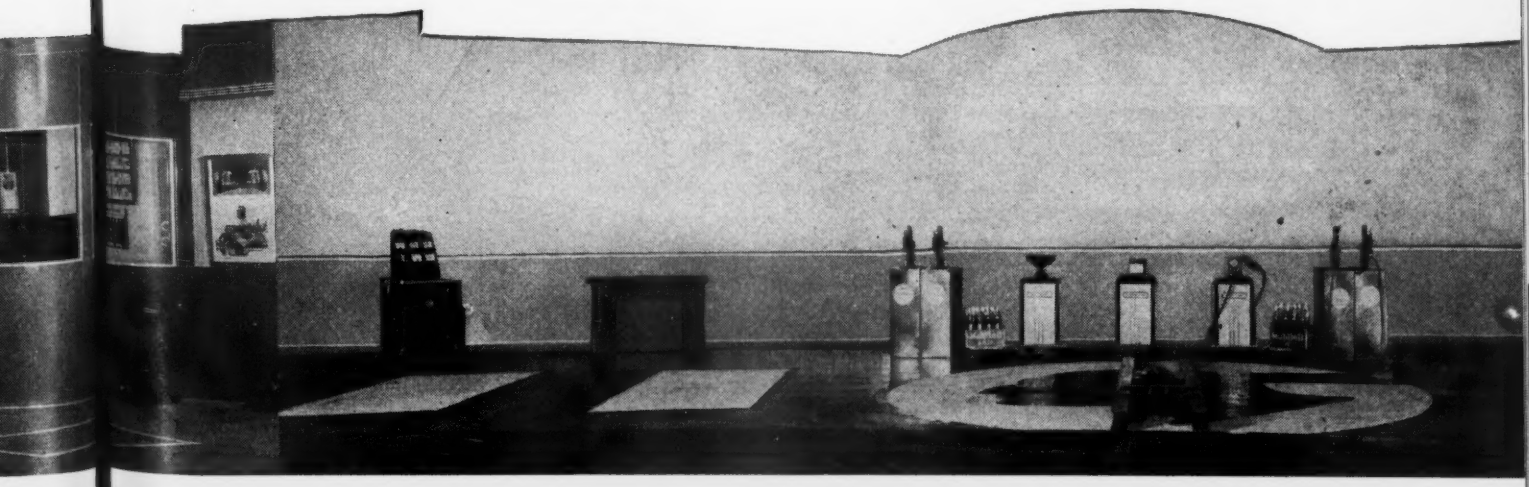
The survey embraced the entire state of Pennsylvania, which includes two large metropolitan areas, Philadelphia and Pittsburg, twenty-two cities of 25,000 population or more, and reports from state-wide towns and rural communities. The survey is comprehensive in that 1704 dealers reported; 10 per cent were represented from large metropolitan areas; 18 per cent operated in cities of 25,000 population or more (exclusive of the metropolitan areas) and the

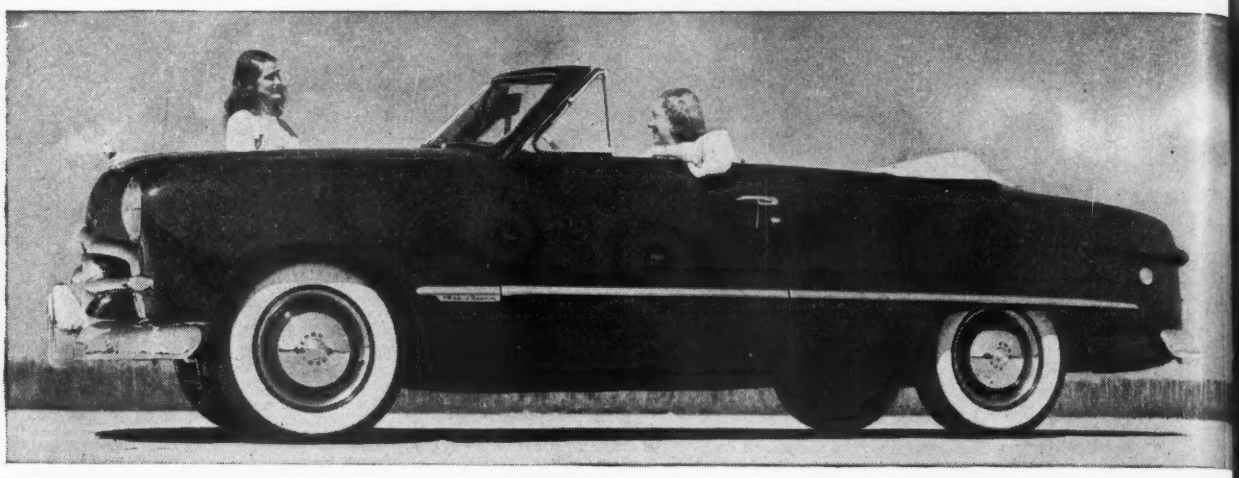
CONTINUED ON PAGE 118

HOW DEALERS PAY MECHANICS

A study of the two basic pay systems used in dealers shops throughout Pennsylvania and arranged by makes of car.

Car Make	Paying % Straight Time	Hourly Rate Paid Straight Time			Paying % Flat Rate	% of Flat Rate Mechanic Receives		
		.72 to 1.00	1.01 to 1.25	1.26 to 1.65		40 to 50%	51 to 60%	Over 60%
Buick	66%	29%	45%	26%	31%	91%	6%	3%
Cadillac	66%	25%	50%	25%	25%	100%	..	..
Chevrolet	75%	41%	44%	15%	19%	79%	13%	8%
Oldsmobile	56%	28%	44%	28%	44%	93%	7%	..
Pontiac	75%	22%	48%	30%	17%	100%	..	..
Chrysler	77%	25%	48%	27%	9%	83%	17%	..
DeSoto	83%	28%	50%	22%	11%	92%	8%	..
Dodge	69%	31%	46%	23%	14%	95%	..	5%
Plymouth	76%	28%	48%	24%	11%	91%	7%	2%
Ford	63%	40%	42%	18%	34%	90%	10%	..
Lincoln-Mercury	55%	8%	42%	50%	38%	89%	11%	..
Hudson	72%	32%	50%	18%	10%	88%	12%	..
Kaiser-Fr.	92%	39%	39%	22%	6%	100%	..	..
Nash	84%	21%	46%	33%	12%	86%	14%	..
Packard	83%	16%	59%	25%	10%	100%	..	..
Studebaker	73%	26%	53%	21%	15%	83%	17%	..
Willys	82%	21%	65%	14%	0%	..	..	..





The 1949 Ford Convertible, shown above, features full fender width body and luxurious interior. Completely new, the chassis is doubly reinforced.

Drastic Changes in Design of the '49 Ford

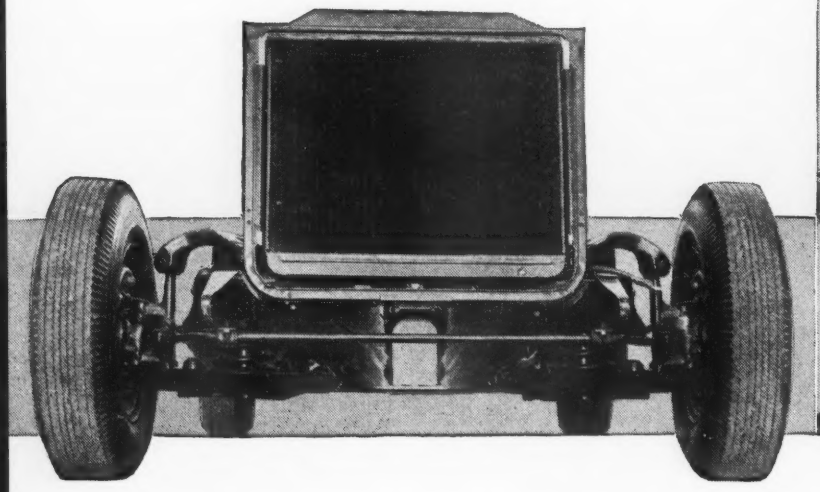
Independent front suspension, improved gas mileage, and new styling are featured by Ford

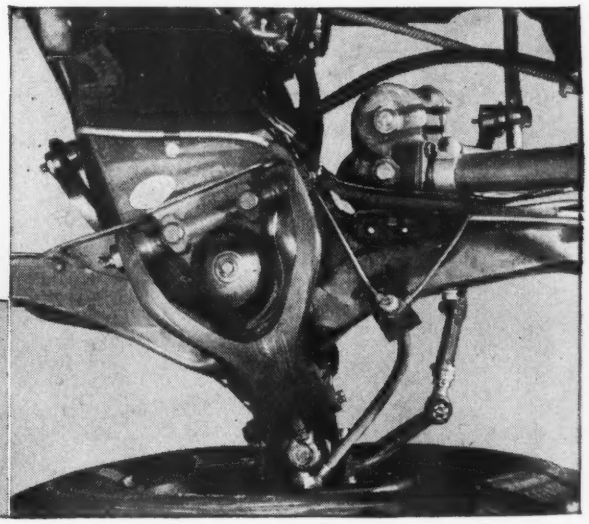
FORD MOTOR COMPANY'S $37,400,000 retooling job has resulted in a radical change mechanically as well as in the styling of their 1949 models. Many of these new features represent a complete departure from all previous engineering designs.

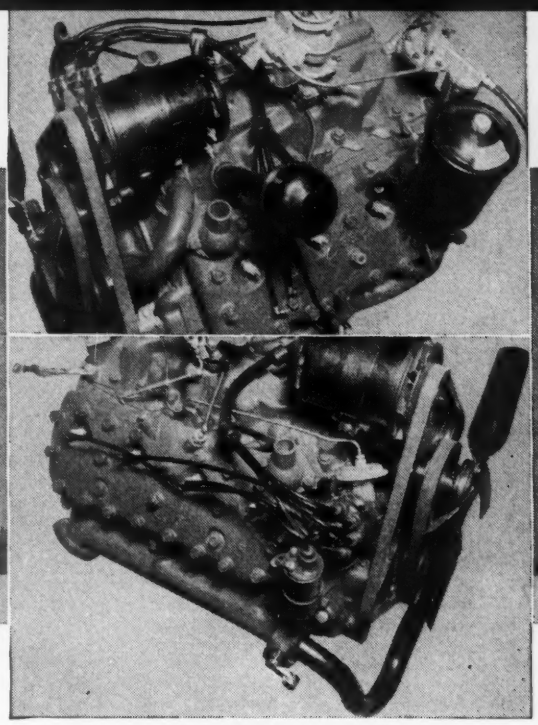
There has been a change in the weight distribution, effected by moving the body forward five inches so that the rear seat is ahead of the rear wheelhousing, and the engine moved forward correspondingly. This change offers front seat hip room of 61.5

Below left: View of the independent front end suspension, with shock absorbers inside hydro-coil springs

Below: Looking at the left front upper control arm from above. Steering geometry is said to have been improved greatly by the adoption of a parallel link layout.







Above: Left side of engine showing the relocation of the oil filler pipe, thermostat housings on heads, and crankcase vent line.

Below: View of engine from right showing relocation of the distributor, coil, and exhaust cross pipe, also the damper valve on the exhaust manifold.

inches, shoulder width of 57.2 inches, and a rear seat hip width of 60 inches.

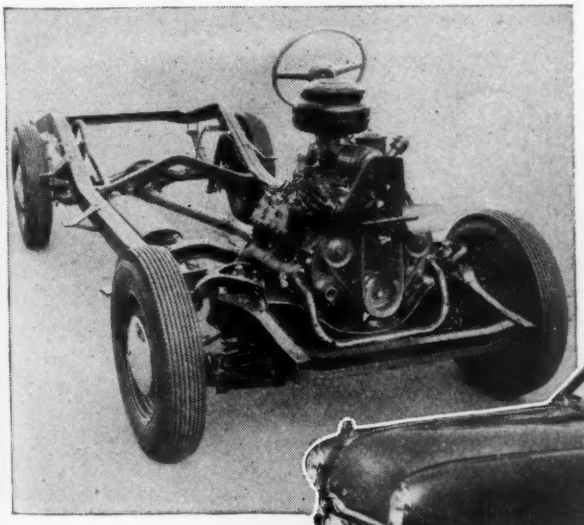
The 95 horsepower Six and the 100 horsepower V-8 engines have several changes. Among these are a different oil pan, a different exhaust manifold crossover arrangement, and a damper valve on the exhaust manifold. A change in the intake manifold, which is designed to give better fuel distribution, is so mounted that it is parallel with the ground line, thus reducing the tendency for raw

CONTINUED ON PAGE 70

Four Door Sedan Specifications

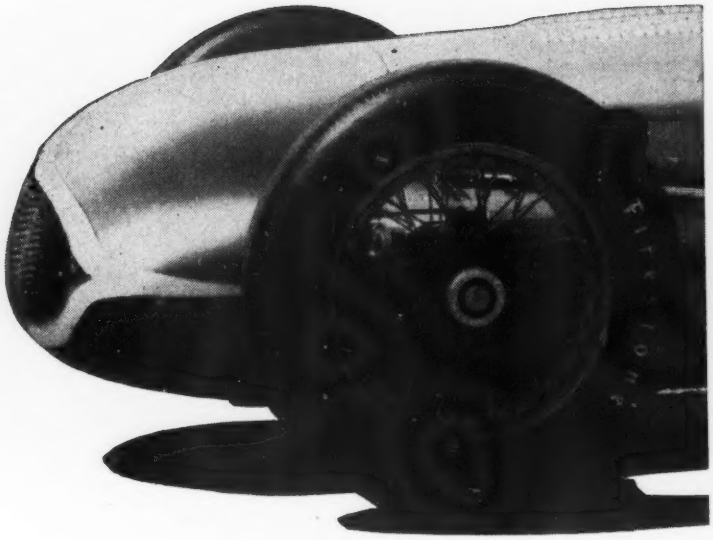
Wheelbase	114"	
Curb Weight	3175	
Overall Length	196.75	
Maximum Width	71.7	
Height — Loaded	62.75	
Tread — Front	56	
Rear	56	
Engine Displacement	V-8	6
	239	226
Horsepower	100	95
Tire Size	600 x 16	
Front Seat Width (Hip Room)	61.5	
Front Seat Shoulder Width	57.2	
Width of Body at Center Pillar	61.0	
Rear Seat Hip Room	60.0	
Brake—Type	Hydraulic	
	Independent	
Front Spring	Coil	
	Longitudinal	
Rear Spring	Leaf	
	Hotchkiss	
Drive	Semi-Floating	
	Hypoid	
Differential	2-Pinion Differential	

Below: Overall view of chasis showing the two semi-elliptic longitudinal springs, and direct acting shock absorbers. The adoption of Hotchkiss drive and a semi-floating hypoid rear axle are also new features.



Below: The club coupe, is designed to carry six big people with ample luggage space.

Lou Moore, owner and builder of the Blue Crown Specials which won first and second money, and the author examining spark plugs after test run.



by JACK MONTGOMERY
Technical Editor

Mechanical Close-up of

These views of some of the world's best race cars may not emphasize glamour,

A NEW track record of 119.813 m.p.h. and many changes among the leaders in the last laps made the 1948 Indianapolis race one of the most exciting in history. Mays led up to the 17th lap, then Horn, Holland, Rose and Nalon changed the lead back and forth right up to the end of the race with Mauri Rose coming in first, Bill Holland second, Duke Nalon third and Ted Horn fourth. All four drivers beat Floyd Roberts' 1948 record time. Lap prizes were distributed as follows: Mauri Rose $8000, Ted Horn $7500, Rex Mays $3600, Duke Nalon $900. The other drivers finished as follows: Mack

CONTINUED ON PAGE 65

Interior of Lou Moore's shop at the speedway. Mechanics build their own shops in spaces allotted to them.

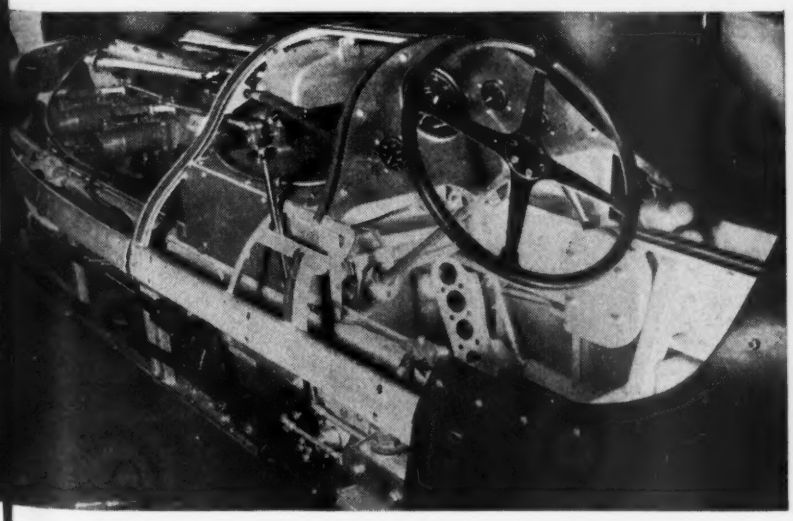
Above. Mauri Rose in his winning Blue Crown Special. As he won this third race he also established a track record of 119.8 m.p.h.

Right: Lou Moore working on the brakes on the car which carried Mauri Rose in his last two victories.

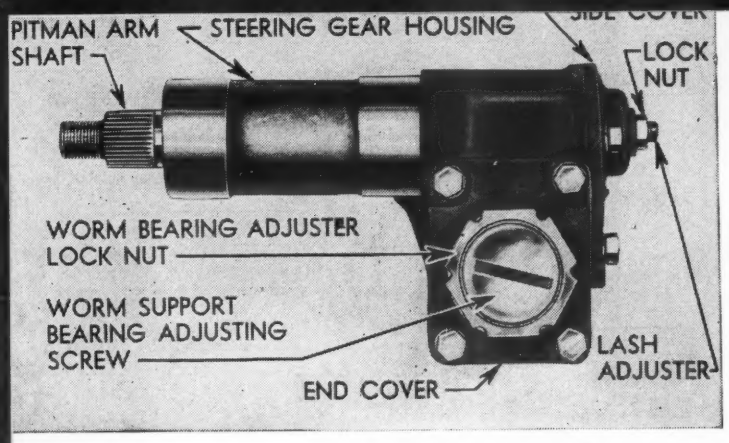
Indianapolis Winners

but they clearly show many of the features which have made them winners.

Cockpit and chassis of Mauri Rose's winning car. Note the simplicity of the dash board arrangement.



Lou Moore and Charley Marant, Moore's head mechanic, preparing Bill Holland's car for the Indianapolis 500 mile race.



Steering gear housing on the re-circulating ball type steering system, showing adjustment points.

Servicing Buick

The heart of the steering system, which

OVERHAULING or adjusting the re-circulating ball type steering requires quite a lot of checking and thought. Before removing the steering make a complete adjustment on it as follows: First disconnect the pitman arm or tie rods then turn the steering wheel slowly from extreme right to extreme left. If stiffness or roughness is felt, loosen the bolts holding the gear to the frame bracket. One pivot hole and three slotted holes provide for vertical alinement. Sidewise alinement is obtained by rotating the housing in its mounting. Tighten the gear to the housing bolts when proper alinement has been made. To adjust for worm shaft play, first tighten the housing end cover screws, then turn the bearing adjuster until a slight drag is felt on the steering wheel when turning near extreme positions.

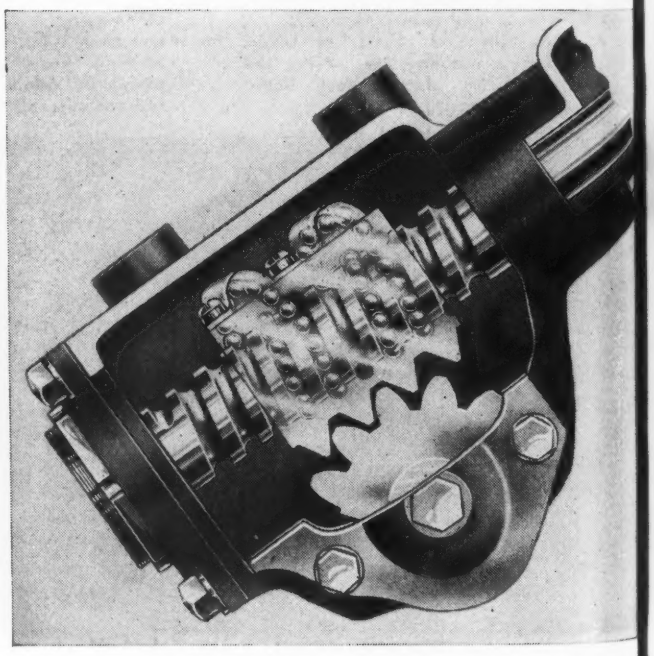
To adjust backlash between the ball nut and the pitman shaft gear, first tighten the three cover screws, center the steering gear, loosen adjusting screw lock nut, and turn the adjusting screw in to tighten or reduce back lash, then out to increase the lash. Tighten the lock nut.

If the above adjustments are not satisfactory, remove the assembly from the car and disassemble as follows:

Rotate the steering wheel until the nut is in the center of travel. Remove three side cover bolts and lift the cover and sector shaft from the housing. This shaft can be removed from the cover by turning the adjuster screw down through the cover. Remove four screws and take out the end cover with worm bearing, outer race and thrust washer.

To remove the lower worm bearing and outer race and thrust washer from the cover, Grasp the lower end of the steering worm and draw the steering shaft and nut assembly out of the housing and steering column. When reassembling be sure shaft is kept in horizontal position so that the nut does not move against the stops at any time, because

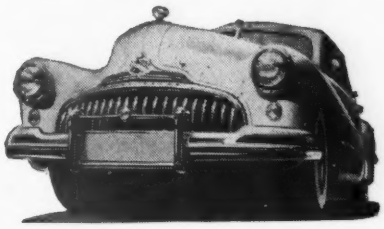
Phantom view of the gear housing showing worm shaft, worm nut, and recirculating balls.



By JACK MONTGOMERY

Recirculating Ball Steering

is often overlooked in periodic safety checkups, is described on these pages

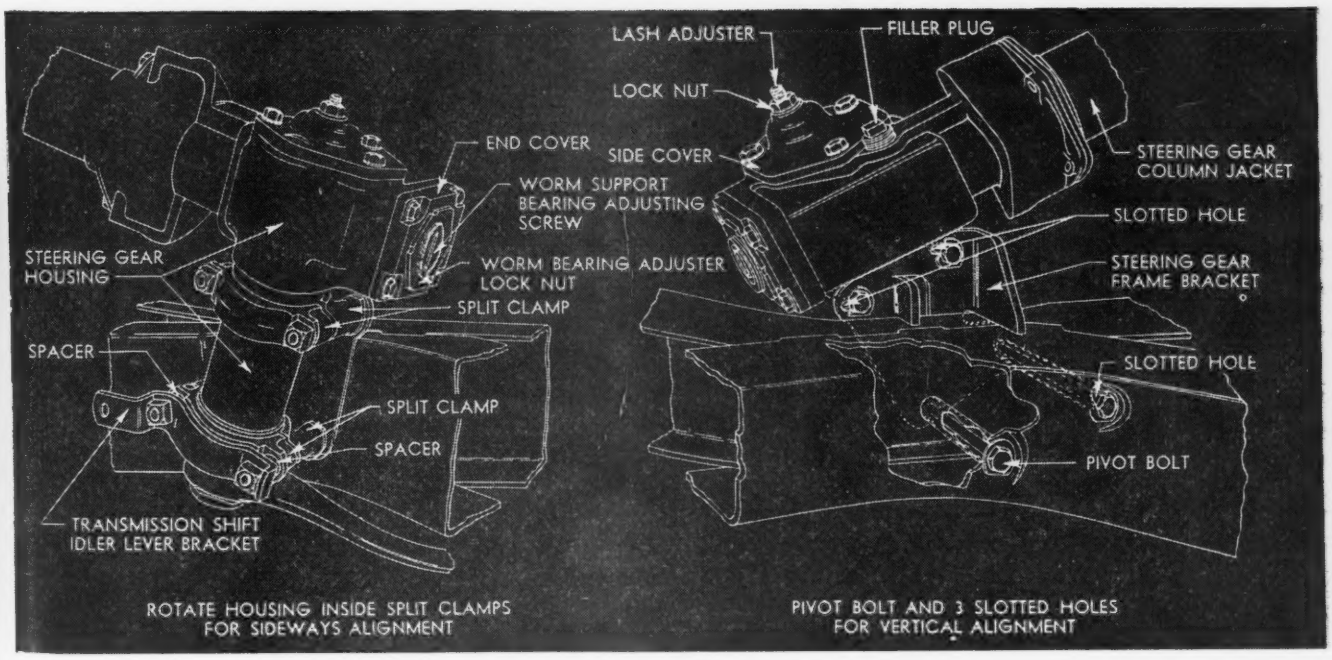


it may damage the ball return mechanism. Disassembly of the worm nut is not recommended.

Before installing the sector shaft, rotate the steering shaft until the worm is at the center of travel so that the center tooth of the sector shaft will enter the center tooth space of the nut. Tighten the worm bearing and sector shaft adjusting screws and bolts until a slight drag is felt. Make final adjustments after steering is installed in chassis.

The principal of ball steering is very simple. When the worm rotates it causes the ball nut to move back and forth as in the conventional type of worm and nut gear. The balls are used to reduce friction between the worm and nut. When steering is turned left the ball nut moves down. The balls roll between the worm and ball nut. As balls reach top of ball nut, they enter the ball return guide and are again directed downward into the ball nut.

Schematic diagram of steering system, showing method of vertical and sidewise alignment.



by LEONARD WESTRATE

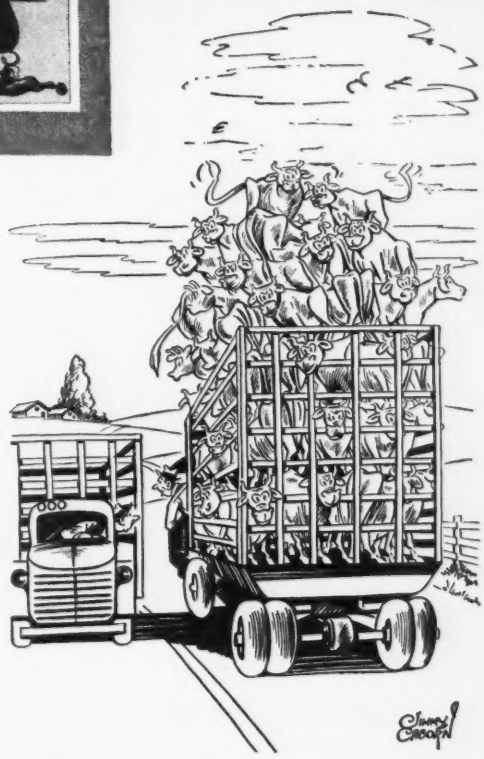
Unfilled Orders Continue to Mount

BACKLOGS of unfilled orders for new cars have taken an upward surge in recent weeks, and piled on top of an already mountainous stack of older orders, have put the number at the highest level in history. Just what the grand total for the industry is at the moment is not known, since not all manufacturers have made numerical estimates of their unfilled orders. However, adding up the estimates for the various GM divisions produces a total of more than 3.17 million. When the estimated 1.6 million orders Ford has on hand are added, the total for the two companies alone stands at nearly 4.8 million. Included in the Chevrolet and Ford computations, of course, are truck backlogs, but these are not considered to be as large as formerly. Chrysler Corporation says it has made no numerical calculation of the number of unfilled orders its dealers have on their books, but K. T. Keller, president, recently told stockholders that the demand for the company's products never has been greater. On the basis of Chrysler's traditional relative position in sales, it would be reasonable to assume that it has at least a million unfilled orders. Other companies have not made definite calculations of their backlogs, but some have stated that they could not fill booked orders for periods ranging from a year to 18 months. By arriving at a figure for each company on the basis of annual capacity, a conservative guess would be that the independents have on hand between 450,000 and 500,000 unfilled orders, exclusive of Kaiser-Frazer, which may have a small number, but not enough to affect the total materially. After adding the backlog of the independents to that of the Big Three and making a generous allowance of one million orders for duplication and other "water," a fairly safe estimate of the size of the unfilled order backlog for the industry as a whole would stand at between 5 and 5.25 million units. Even if the industry could produce consistently at the high rate of 500,000 units a month, as it did in March, it would take more than a year just to wipe out

Even a 500,000 unit per month production schedule could not fill the present backlog of orders in less than two years

CONTINUED ON PAGE 80

"...THERE'LL BE NO CHARGE, MISS... BUT I'D SURE LIKE TO HOLD YOU FOR QUESTIONING!..."

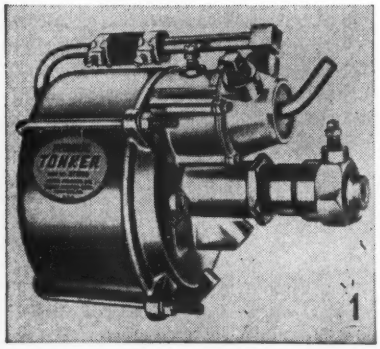


"...YEAH, THIS IS MY LAST TRIP!..."

"...WE JUST RETURNED FROM A TRIP IN THE COUNTRY!..."

"...HAVE Y' HEARD ABOUT THE NEW CAB COMPANY THAT'S OPERATIN' HERE IN TOWN!..."

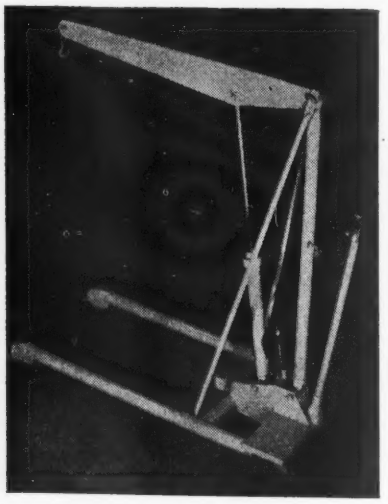
NEW PRODUCTS SHOW WINDOW



1

L-1 Light Duty Hydrovac

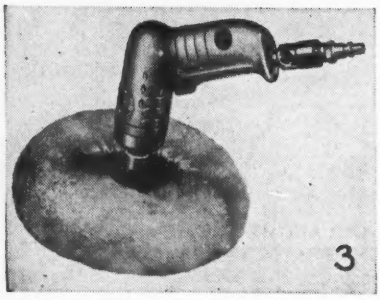
Bendix Products Corporation, of South Bend, Indiana has a new Hydrovac, the "Tonner Model." This addition to their vacuum power brakes has been engineered for trucks in the ½, ¾ and 1 ton pay-load class. It is designed to decrease pedal effort on light trucks, particularly when they are operating with overload, and to decrease stopping distance.

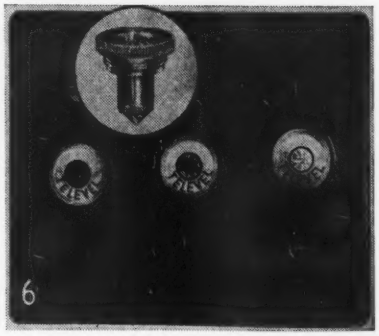


2

L-2 Portable Floor Crane

Manzel, Inc., of Buffalo, N. Y., announces a newly designed portable one ton floor crane. Equipped with two widespread rear casters and two large diameter front wheels mounted directly on the frame, this crane is said to be stable, even on rough floors, or when moved over sudden obstructions, as well as when turned sharply. The guiding handle is attached to the base for accuracy in steering, and the same handle also serves as a pumping lever. Furthermore twin pumping cylinders are designed for easy action from the initial position to the point of contact, where a power cylinder is provided for the actual lifting work.





FOR FURTHER INFORMATION
USE COUPON ON PAGE 72

3
L-3 Aro Power Tool

A new air operated polisher is announced by the Aro Equipment Corporation, Bryan, Ohio. The tool is designed to permit one-hand operation. Speeds are variable from 700 to 2400 rpm. It has a high torque geared motor supported by four heavy duty ball bearings. Low air consumption is claimed for the tool, which can be operated from the line off a standard 1½ hp compressor. In addition to polishing, this tool is said to be adaptable for many service jobs.

4
L-4 Lisle Ring Compressor

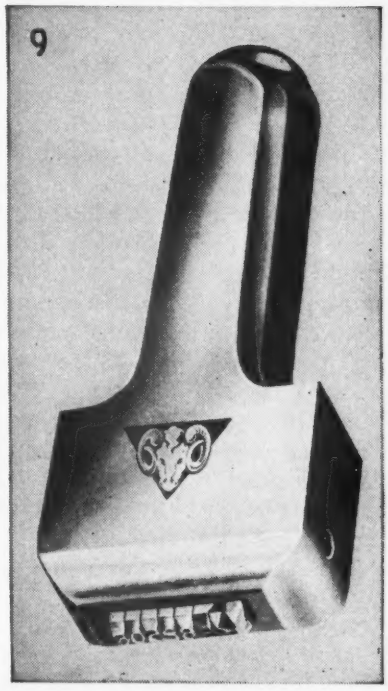
A new "funnel-type" ring compressor has been announced by the Lisle Corporation, Clarinda, Iowa. After the compressor is adjusted for the first piston, it can be used for the entire set without opening and resetting, because each piston is easily started through the large end of the funnel with the aid of a finger grip on the side of the compressor.

5
L-5 Allen Timing Light

The Allen Electric and Equipment Co., Kalamazoo, Mich., has designed a power timing light which is said to develop a light beam of sufficient intensity to illuminate engine timing marks in direct sunlight. The sharp cutoff of the strobolamp is said to be effected by a dampening circuit, thus preventing timing mark blur regardless of engine speed or outside conditions.

7

8


9

6
L-6 "Televel" Vent Plug

A clear plastic vent plug, has been announced by the National Battery Company, St. Paul, Minn. When water is low, the words "Add Water" can be seen, by looking down into the hollow barrel. The vent plug need be removed only when water is added.

7
L-7 No-Roll Lamp Guard

The new No-Roll cage for portable lamp guards, designed by the McGill Mfg. Co., Inc., of Valparaiso, Indiana, has just been announced. This new development in lamp guards features "ears" formed in the cross wires near the handles, equally spaced at four points on the otherwise old-style circular cage. This new design in the No-Roll cage is said to prevent lamp guards from rolling.

8
L-8 New Trico Cabinet

An entirely new type of wall cabinet for Trico windshield wiper blades and arms is announced by the Trico Products Corporation of Buffalo, N. Y. When stocks are nearly sold, a refill cartridge containing a complete new assortment can be slipped on. Ample room is provided in the refill cartridge for any blades and arms remaining in the discarded container.

9
L-9 Acme Stamp Holder

A steel stamp holder designed for marking parts where it is undesirable to stock a quantity of different stamps is now available from the Acme Marking Equipment Company, Detroit, Mich. The type inserts are inserted and removed by loosening and tightening a set screw.

CONTINUED ON PAGE 72

Larry was sure he was on the right track when he wanted to install a new set of mains, but maybe that romantic girl on the scenic railway made him lose his bearings . . . by J. EDWARD FORD

Pop Answers a Mysterious Knock

TOMMY WINTERS had his head under the hood of a panel delivery, reinstalling an air cleaner, when he first heard the noise. It sounded like a dozen cars with shorts in the horn circuits. Pulling his head out into the clear, he started for Larry's bench, but the latter was already on his way to investigate the racket.

As Tommy reached the door, the first of the cars cruised by, with colored paper streaming in the afternoon breeze and a pair of old shoes bouncing along behind. The cars following were raising a din that would have made a V-J day celebration sound like a chess tournament.

"So it's June again," said Larry.

"I wonder," said Tommy, "why so many fellows decide to get married in June."

"What do you mean 'fellahs' decide?" snapped Larry. "The dames do the decidin'. The poor guys is just hooked."

"You don't mean girls go around asking fellows to marry them?" said Tommy. There was a trace of alarm in his voice.

"They're too smart for that. Take what happened to me. We go to New York for a day and we're down at Coney Island doin' a scenic railway. I got my arm around her, like you always do on one of them rides, and I'm gettin' a big wham out of a big dip. So I opens my big yap and say, 'I could spend the rest of my life like this.'

"And she cuddles up closer and says 'Why, darlin', that's the nicest proposal a girl ever got. Of course I'll marry you'."

"But," said Tommy, "you didn't really propose. Why didn't you tell her?"

Larry snorted. "It's about as easy to tell a woman anything as it is to argue with Pop."

"You're going to get a chance to argue with him," said Tommy. "He's watching us from the office door."

"If that guy worked as hard at everything else as he does at keepin' the eye on us, he'd make enough dough to pay decent wages."

"He's coming over," said Tommy, as Larry began to saunter toward his bench. "I'll bet he's going to ask us about the Buick that salesman brought in this morning. He said to have it ready by five, and we haven't even touched it."

"Sure we did," said Larry. "We drove it around the block. But I got the answer for Pop. We can't finish it up today. It needs a new set of main bearings."

"How do you know?"

"You heard how it acted. Every time I

Illustrated by FERD OBECK

took my foot off the gas, it started knockin' like somebody was beatin' the block with a sledgehammer."

"I'll bet Pop would want to make an oil-pressure test before he put in new mains."

CONTINUED ON PAGE 92

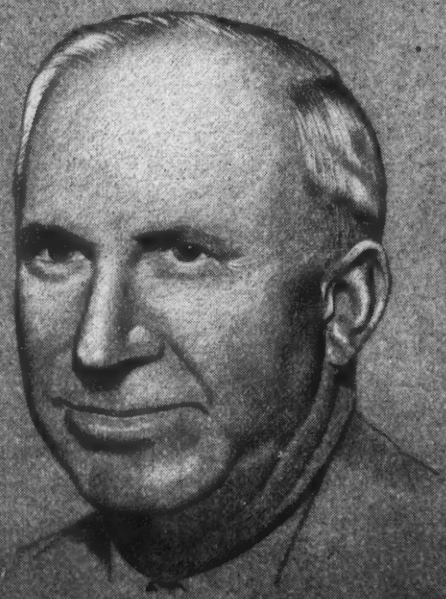
"I got my arm around her, like you always do on one of them rides, and I'm gettin' a big wham out of a big dip."

FACING YOUR WAY

ALBERT SOBEY has been named president of General Motors Institute, famous industry school with 20,000 enrollees

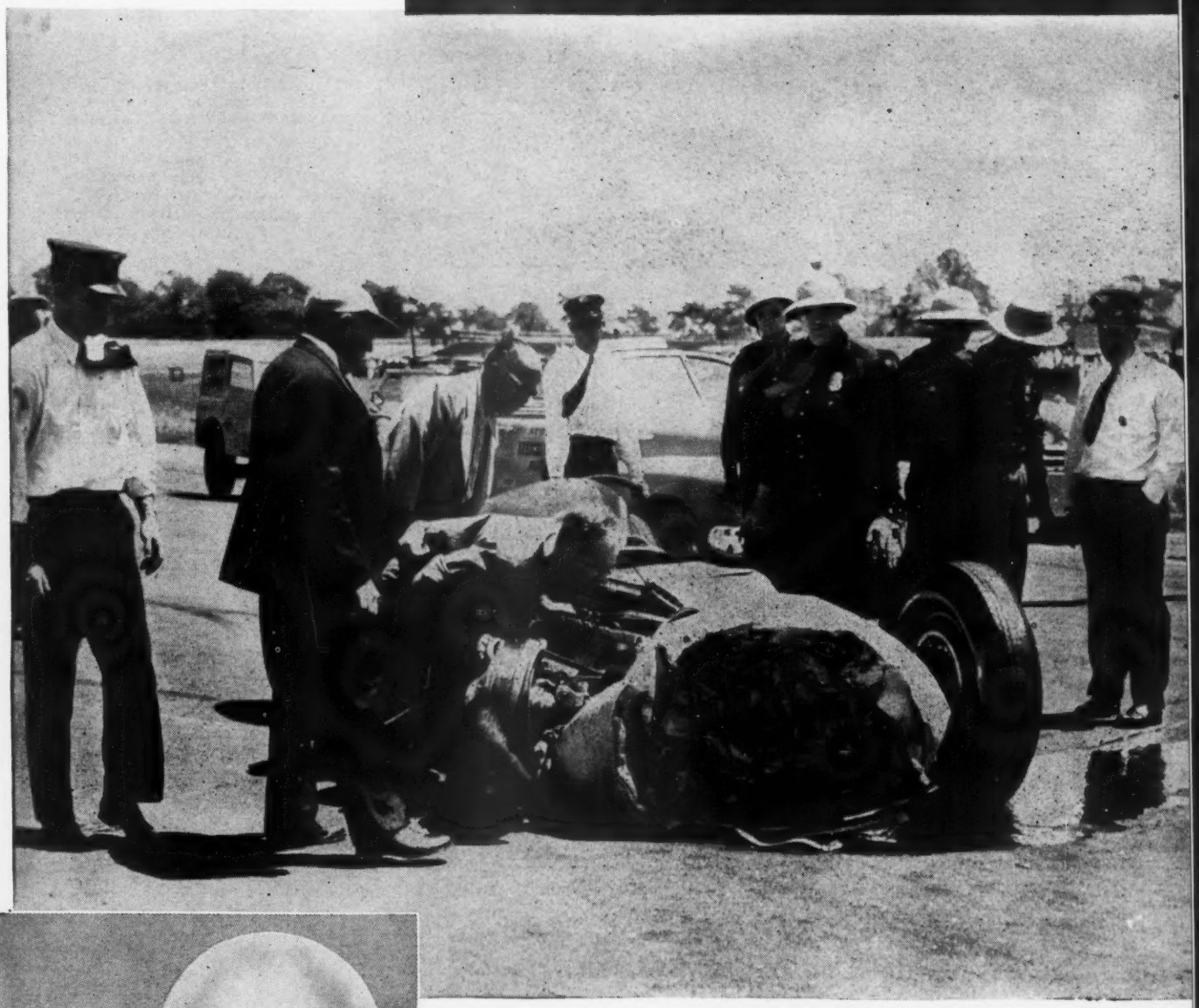
GEORGE H. BOUCHER, vice president in charge of sales, was recently elected a member of the board of Pyrene Mfg. Co.

R. EARL BURROWS, secretary of Cleveland Automobile Dealers Assn., is president of the Automotive Trade Assn. Managers

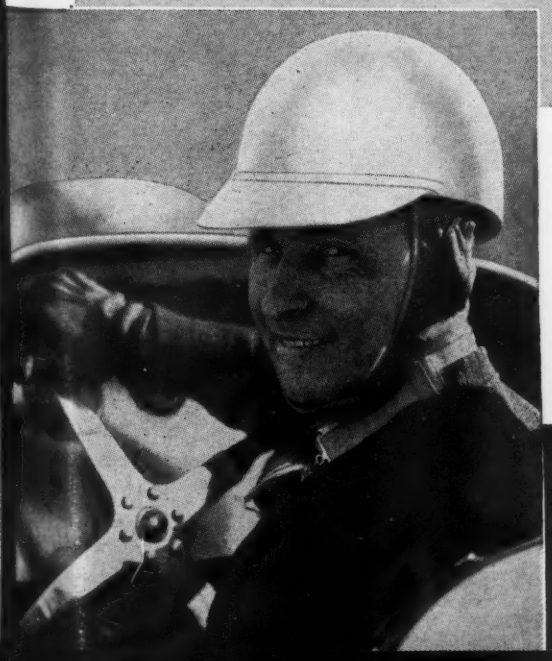


ERLE A. HENDERSON, Sacramento, Calif. wholesaler, is the new president of Motor Equipment Wholesalers Association

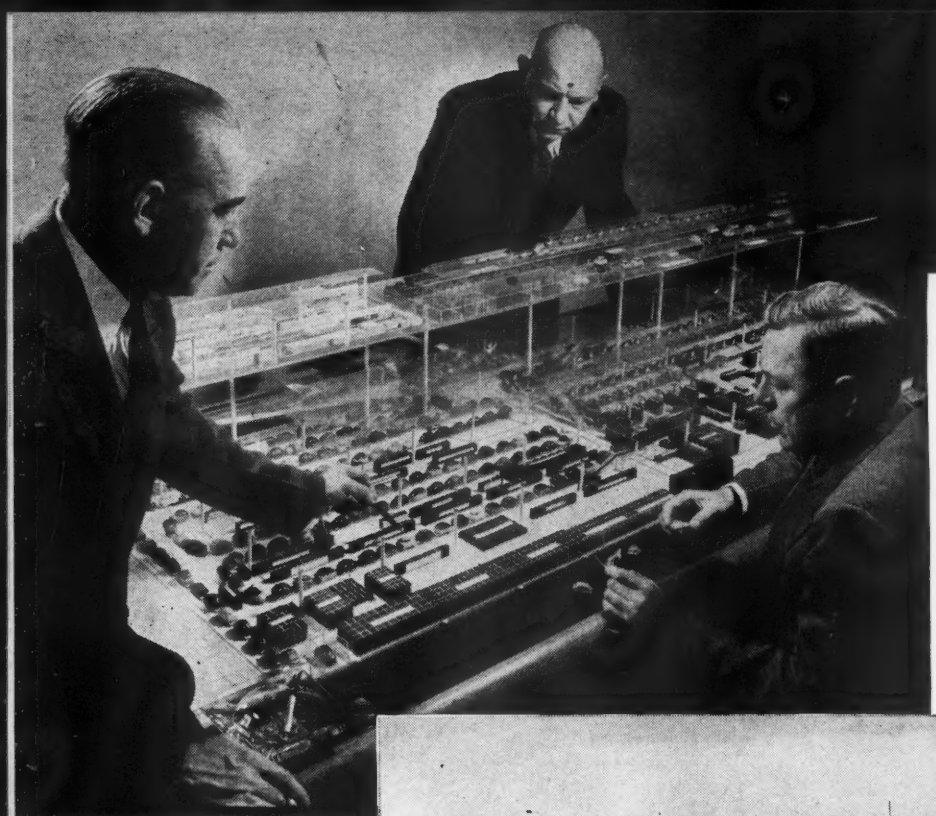
NEWSCENE



Track officials examine the wreckage of the Novi-Grooved Piston Special, in which Ralph Hepburn was killed during a practice run on May 16th at Indianapolis.

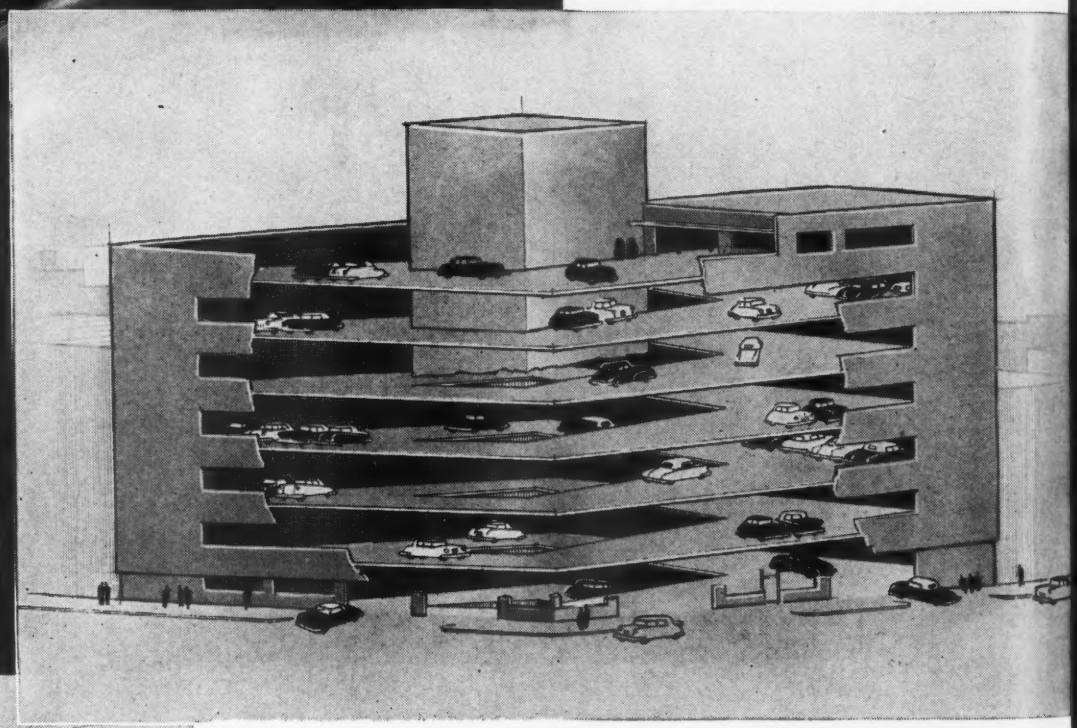


Ralph Hepburn, 51, of Van Nuys Calif., was a veteran of 15 races at the Speedway. On the second day of qualifications he crashed into the north wall of the track travelling at record shattering speed.



Accurate to the smallest detail is this scale model of the Fisher Body Los Angeles plant. The layout is used in planning operations.

This self-parking garage with a continuous floor running corkscrew fashion from basement to roof is capable of parking 446 cars. The structure is designed to be used in conjunction with the new office building of the General Petroleum Corp., in Los Angeles, Calif.



Cars have really gone UP in Detroit! But this 1923 Model-T on top of the Frost-Avis Ford agency is not for sale.

Hitch-hiking is illegal in Colorado, even for Miss Mary Merwin. Captain Russell De Salvo demonstrates how the long arm of the law shakes its finger at thumb waggers.

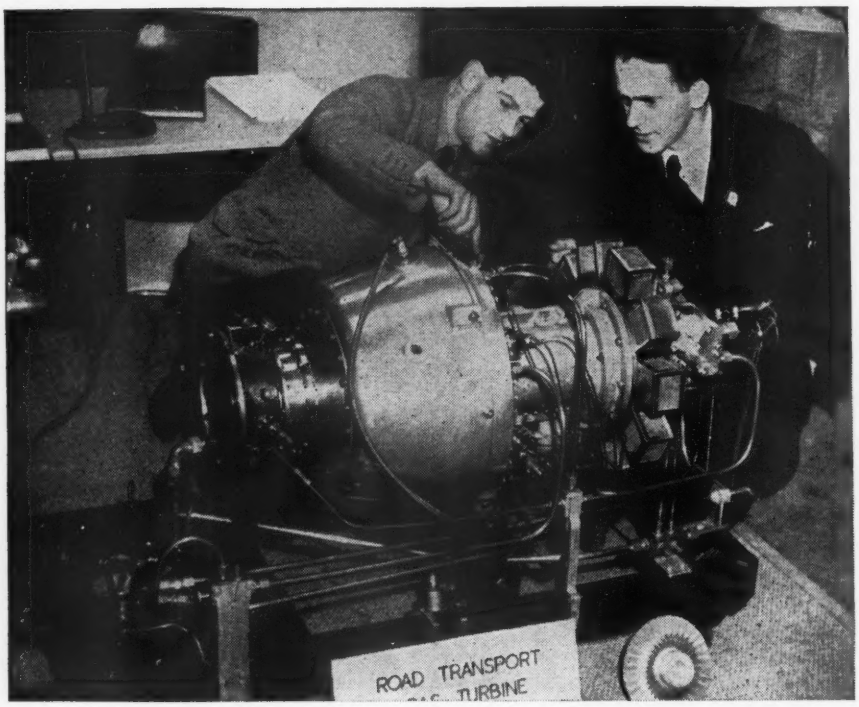
NEWSCENE

Brooklyn's first free municipal parking area, four blocks long, is capable of handling 1,000 cars a day on a two hour limit.

Failure of his air brakes forced John Vinchequerra to plow through this service station in San Francisco. No one was hurt, but the damage amounted to about $16,000.

Designed to reduce the number of accidents caused by sleepy drivers, the Alertness Indicator, worn here by Mrs. Margaret Raben, causes an alarm to sound when a driver's mental activity drops to the "drowsy point."

NEWSCENE



This jet car motor was introduced at the British Industries Fair in Birmingham, England. The engine, with 160 brake horsepower, is said to equal that of a gasoline-driven car of 35-40 h. p., and to be usable for trucks or limousines. Five feet, long, it has a maximum diameter of seven inches, and weighs 250 pounds. It has no pistons, cylinders, spark plugs, radiator or clutch, and is said to give off no dangerous exhaust.

Austin to Bring Out A Sports Convertible

Having sold nearly 6,000 British Austins in the United States in the past six months, The Austin Motor Company, Ltd. will continue its policy of concentrating on models below and above the accepted price range of American cars, according to Leonard P. Lord, chairman and managing director of Austin. Although Austin will rely principally on the present 40-horsepower models, Lord said that a new sports convertible will be presented toward the end of this year. It is expected to be somewhat larger than the current Austins, but still not quite so large as the average American car.

"The West Coast has turned out to be one of our best markets," said Lord with regard to sales, "and undoubtedly is the most important market after the metropolitan Eastern seaboard. Our original plan was to sell 12,000 Austins here annually, but we are convinced now that either New York State alone, or the West Coast by itself, would take the entire 12,000. In fact, we believe we could sell 50,000 Austins here in a year, if we could make them, and if we could get the materials.

"Our present shipments to the United States average 1,000 a month, and I do not believe we can lift this figure above 1,725 a month by the end of the year. Austin production is only about 70 per cent of capacity right now, owing to critical shortages of various materials, such as steel, copper, leather, and lead for batteries.

Heat Conducting Glass Keeps Ice off Windshield

Heat conducting glass, put to use for de-icing windshields in one of the severest winters on record in the last quarter century, may give new safety and additional comfort in cold weather. Glass normally is used as an insulator, but it becomes a conductor of electricity by coating it with an invisible film.

The research staff of Libbey-Owens-Ford Glass Company, which holds patent rights on the new windshield, declares that last winter's tests bear out successful results of earlier laboratory experiments and satisfy every qualification for its commercial manufacture.

Higher voltage than is normally found on the average family automobile is required for efficient operation of the de-icer. The most feasible method of supplying current, Mr. Gaiser one of the researchers, believes, is to replace the conventional generator with an AC generator. The AC current then can be transformed to voltages sufficiently high to perform the necessary de-icing operation. Many police and fire cars and ambulances have AC equipment for radio transmitting purposes. No additional equipment would be needed in those cars.

Rate of heating the glass depends entirely upon the voltage that is thrown into the film. Gaiser, in his experiments, installed an AC generator and used 110-volt current. He pointed out that the glass "heats rapidly" with such equipment, acting as a barrier to the formation of ice and quickly melting ice already formed. In one test in six-below zero weather, starting with his

CONTINUED ON PAGE 146

Motor Equipment Manufacturers Association Averages Wholesalers' Financial Statements

The survey covering 411 balance sheets just completed shows conclusively that the after-market industry, as a whole, is in a state of excellent health. Liabilities remained constant. Not as much change took place in Cash and Receivables as was expected. Inventories are up substantially. The composite picture is one of easy liquidity with no serious problem because of the additional working capital tied up in stocks.

Sales volume exceeded that of 1946, in itself a banner year. The sales increase figures 7.4 per cent which may be a reflection of higher prices and not an increase in unit sales. Gross Profit slipped one-half per cent and Net Profit suffered to the extent of one and one-tenth per cent. Stock turnover was slower, dropping from 4.3 in 1946 to 3.8 in 1947.

Collection period remains 28 days.

CONTINUED ON PAGE 148

No Automobile Show Planned for 1948

There will be no national automobile show this year, according to reliable information in Detroit. A member of the show committee reports that automobile sales managers are not even mentioning a show any more. J. R. David, Ford sales and advertising chief, said in a talk recently that he believes it will be two or three years before the national show will be resumed. Location of the show, when it is held, still has not been settled. Considerable sentiment has developed for bringing it to Detroit, instead of going back to the traditional location in Grand Central Palace in New York.

However, suitable facilities for a show in Detroit are still in question, although it is believed that arrangements could be made, especially if resumption of the event is delayed for two or three years.

SLANTS on the NEWS

by CHARLES M. KENYON

★ During 1947 nearly 10 per cent more gasoline was sold for use on the highways than was sold during 1946. This indicates a marked increase in the use of passenger cars. State gasoline taxes were collected on 28,407,000,000 gallons of motor fuel. This is up 2,539,000,000 over the previous year. The largest percentage increase in the use of gasoline was in Wyoming, which showed a 15 per cent increase. California led all states in the amount of motor fuel used, 2,739,906,000 gallons, an increase of 12 per cent; and New York was second in total gallonage with 1,943,409,000 gallons, which was an increase of 8.4 per cent.

★ **According to recent figures released by the Automobile Manufacturers Association, the average life of a modern car is double that of the 1925 product. Then average life of cars was 6½ years and average mileage at scrapping time was 25,570 miles. In 1946 the average car junked was 12.7 years old and averaged 90,000 miles. From the same source comes the interesting information that back in 1925, 4,000 miles per year was piling it on, by 1941 we drove twice that far in a year, and today we average 9500 miles.**

★ The Navy Department has announced development of successful noninflammable hydraulic fluids. Called "hydrolube" fluids because they are made from a water base, their freezing point is 50 below zero, they do not have the corrosive action of water, and lubricating properties are satisfactory. However, there is much greater leakage than with present hydraulic fluids.

★ U. S. Rubber Company claims that their new experimental synthetic tire, compounded at low temperatures, will give 30 per cent more miles of tread wear than the best natural rubber, that it shows a significant improvement in tensile strength and that it is more resistant to cracking.

★ **Although Oldsmobile has remained officially silent on the new V-8 engine now running in many test cars, it is probable that the new V-8 will be used throughout the Olds 8 line rather than in the 98 alone, because of the manufacturing economies which would result.**

★ General Motors can do no right! Now that the strike is settled, the corporation is bored by both horns of a dilemna. If the company holds prices to present levels, the unions will cry, "See the company was making enough money to pay the increase." On the other hand if the company does raise prices, the equally rancorous cry will be, "Passing the buck to the poor consumer."

NEWSCENE

AAA Studies 37 Million Road Trips by 14,000 Shops

Although there was a sharp drop in the number of flat tires experienced by motorists during 1947, increases in battery failures and other assorted difficulties kept motoring woes at a high level during the year, the American Automobile Association reported recently.

On the basis of reports from approximately 14,000 AAA garages throughout the country, it was estimated that the nation's cars were stalled a total of 37,260,000 times during the year as against 36,204,000 in 1946.

large quantities," AAA experts commented. "It probably also is an indication that the average motorist is much more tire-conscious than he was before the war and is continuing, for reasons of economy, the conservation practices adopted earlier of necessity.

"Although there was a slight increase in the number of breakdowns during 1947, it was not as large as the gain in the number of cars on the road. Thus the chances that the average motorist would have a breakdown during the year showed a fractional decrease."

AUTOMOBILE BREAKDOWNS IN 1947

(Based on reports from A.A.A. official service stations)

TYPE OF SERVICE	NUMBER OF BREAKDOWNS 1947	NUMBER OF BREAKDOWNS 1946	PERCENTAGE OF TOTAL 1947	PERCENTAGE OF TOTAL 1946
Tire	8,864,000	10,836,000	23.79	29.93
Battery	7,098,000	6,484,000	19.05	17.91
Tow	5,145,000	5,083,000	13.81	14.04
Ignition	4,095,000	4,392,000	10.99	12.13
Carburetor	2,508,000	2,371,000	6.73	6.55
Wrecked	2,031,000	1,448,000	5.45	4.00
Stuck	1,535,000	1,006,000	4.12	2.78
Out of Gas	1,051,000	873,000	2.82	2.41
Starter	831,000	529,000	2.23	1.46
Lock and Key	473,000	416,000	1.27	1.15
Gas Line	425,000	384,000	1.04	1.06
All Others	3,204,000	2,382,000	8.60	6.58
TOTAL	37,260,000	36,204,000	100.00%	100.00%

The number of flat tires—alway the leading cause for breakdowns—showed a drop of 18 per cent, totaling 8,864,000 as against 10,836,000 in the preceding year. Meantime battery failures showed a substantial increase with the total for the year being placed at 7,098,000, running tire troubles a close second as the major cause of mechanical difficulty.

"The drop in the number of flat tires during 1947 undoubtedly reflects the wide-scale replacement of war-weary rubber that took place as soon as new tires again came on the market in

The AAA's annual round-up of auto breakdowns is based on a projection of the experience of 2,300,000 motor club members. Other highlights from the report:

Over 5,000,000 cars had such serious breakdowns that they had to be towed in for extensive repairs. In more than 2,000,000 cases—usually involving an accident—wrecker trucks were dispatched to the rescue.

Ignition troubles, accounting for more than 4,000,000 calls for help, were down from the previous year while carburetor difficulties brought more than 2,500-000 S.O.S. pleas.

Auto Refinishers School Announced by DeVilbiss

Two comprehensive one-week courses for auto refinishers are included in the DeVilbiss School of Spray Painting curriculum for the second half of 1948. Maintained as a service to all users of DeVilbiss equipment, these tuition-free courses include instruction on spray painting technique and function and care of spray equipment.

Classes, lasting one week each, on July 26 and November 1, with both courses covering the same instruction. Since class size is necessarily limited, it is advisable to write for reservations as early as possible to The DeVilbiss Company, 300 Phillips Ave., Toledo 1, Ohio.

MEWA Directors Hold Election of Officers

The Board of Directors of the Motor and Equipment Wholesalers Association held their annual Board meeting recently in Chicago at the Edgewater Beach Hotel. At this meeting the annual election of officers for the new year which runs from May 1948 to May 1949, was held and also the newly elected directors to succeed retiring Board members were announced.

Erle A. Henderson of Henderson Brothers, Sacramento, California who was Vice President of the Association for the past year succeeded Frank K. Meyer, of Houston, Texas, as President. Mr. Henderson has been in the automotive wholesale distribution business since 1921 and active in automobile affairs on the West Coast for many years. He is President of Henderson Brothers Stores, Inc. Beside the main store in Sacramento, his organization operates eight branches under the name of Motor Supply Co., all are located in California.

John M. McClure, President of the Minneapolis Iron Store, Minneapolis, Minnesota succeeds Henderson as Vice President of the M.E.W.A. for the coming year.

Arthur W. Pease, Pease Broth-

CONTINUED ON PAGE 152

GM Australian Subsidiary Nearly Ready with New Car

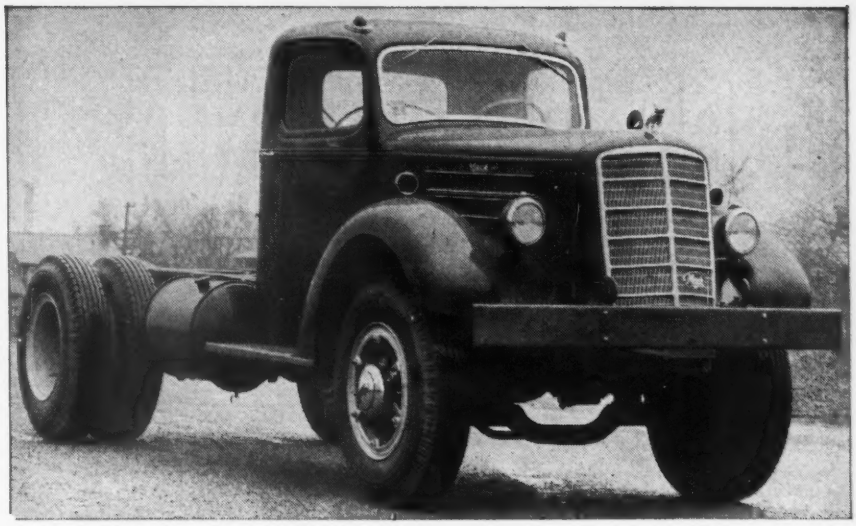
General Motors Holdens hopes to get in production of its new Australian light car about Sept. 1. Development of the car has been delayed beyond original expectation by lack of experienced personnel. After initial production problems are solved, the company hopes to turn out cars at the rate of 20,000 a year and to step up to 40,000 annually.

Stout Named Advertising Counsel for NSPA Division

J. L. Wiggins, executive president of the National Standard Parts Association, has announced the appointment of George W. Stout of George W. Stout, Inc., as advertising counsel to the automotive wholesaler division of NSPA.

Mr. Stout recently resigned as sales promotion manager of the Perfect Circle Corporation in order to devote full time to establishing his own advertising counseling business.

In commenting on the appointment, Jack Wiggins said, "We are happy to make this announcement about Mr. Stout's new assignment as advertising counsel to our wholesaler division. His past experience, covering more than twenty years as one of the country's leading automotive advertising and sales promotion managers, qualifies him to advise N.S.P.A. and its wholesaler members on advertising problems.



New Thermodyne Powered Mack Tractor Available

A new 45,000 pound basic gross-combination-weight tractor, powered by the Thermodyne engine and offering Mono-Shift Transmission, has been announced by Mack. Designated Model EQT, this new Mack was designed specifically for high-speed tractor operations where exceptional gradeability and overall high performance are demanded.

The EQT has a 431 cubic-inch Thermodyne engine. The design of the new engine is identical with the larger Thermodynes used in the heaviest Mack highway vehicles. At its governed rpm of 2500 the new engine develops 139 horsepower. It has torque output of 330 foot-pounds at 1400 rpm.

Linking the engine to the transmission is a 13⅞ in. diameter single-plate dry clutch with an engagement area of 202 square inches.

The EQT offers a choice of two Mack-built transmissions, both matched to the new Thermodyne engine. Standard is the Mack TR-311 five-speed, direct-in-fifth transmission. The Mono-Shift TRD-313 duplex transmission, offering ten speeds in graduations, controlled by a single gear-shift lever, is available as a optional extra. With the Mono-Shift, compound shifts in either direction may be made simultaneously with main-box shifts. Pre-selection of the compound ratios is also featured.

Chassis construction is typically Mack. Side-members of pressed carbon-steel are joined by cross-members of the Mack box-girder design.

Steering control is by worm and roller steering. The air brakes have an area of 533 square-inches.

The all steel cab is lined in trim leatherette, and has cigar lighter, ash tray, arm rest, dome light, coat hooks and a felt-lined dash compartment. A modern, indirectly lighted, quick-vision instrument panel includes all necessary engine and driving instruments as well as a headlight beam indicator. The seat and back cushions are of foam-rubber. All these cab features are standard equipment.

The manufacturer states that the new EQT tractor will be available for delivery early in July 1948.

North Carolina Dealers Hold Annual Convention

The North Carolina Automobile Dealers Association at its 13th annual convention at Pinehurst, N. C., elected Gene Ochsenreiter of Asheville as its president for the coming year and adopted a resolution commending the State Motor Vehicle Bureau for its highway safety campaign and pledging its coopera-

CONTINUED ON PAGE 154

CLEARING HOUSE

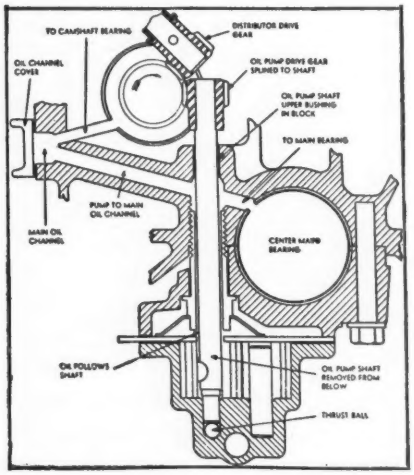
FOR SERVICEMEN'S QUERIES

• • • *By JACK MONTGOMERY • Technical Editor*

Oil Pressure Drops After Driving Quarter Mile

I have a 1940 Ambassador Six Nash (Model 4020). This winter when the weather got down near zero the trouble started. In fact, it always happens at 10 degress above zero or lower and after the car has set for several hours, such as over night or all day.

When the car is first started up the oil pressure shows O.K. until the car is driven ½ mile to two miles then the pump runs out of oil as if by a clogged screen. Then after approximately three or four miles driving the pressure will suddenly come back and be perfectly O.K.



Nash oil passages and pump

When this first happened I naturally assumed that sludge and dirt had clogged the screen. I removed the oil pan and pump screen and cleaned them thoroughly, although the sludge and dirt were practically nil. I installed new rod inserts and new oil S.A.E. #20. The first cold morning after this the same thing occurred. I then put in a treatment of solvent which is very popular in this territory. Still the same trouble. Then I changed the oil to S.A.E. #10 with no better results. Then I added another treatment of solvent. No improvement. Then I tried Kerosene. Still no improvement. I then took the car to a well equipped service station and had the engine thoroughly power flushed and again put in new S.A.E. #10 oil, and still no improvement whatsoever.

I'm sure it has no oil to the bearings because as soon as this happens the rods and mains start thumping and rattling. I surely would appreciate the solution to this problem.—Fred L. Brown, R. D. 9, Box 607, Akron 1, Ohio.

On your Model 4020 Nash on which you are having trouble with no oil pressure after car has been standing awhile, I think your trouble in the oil pump.

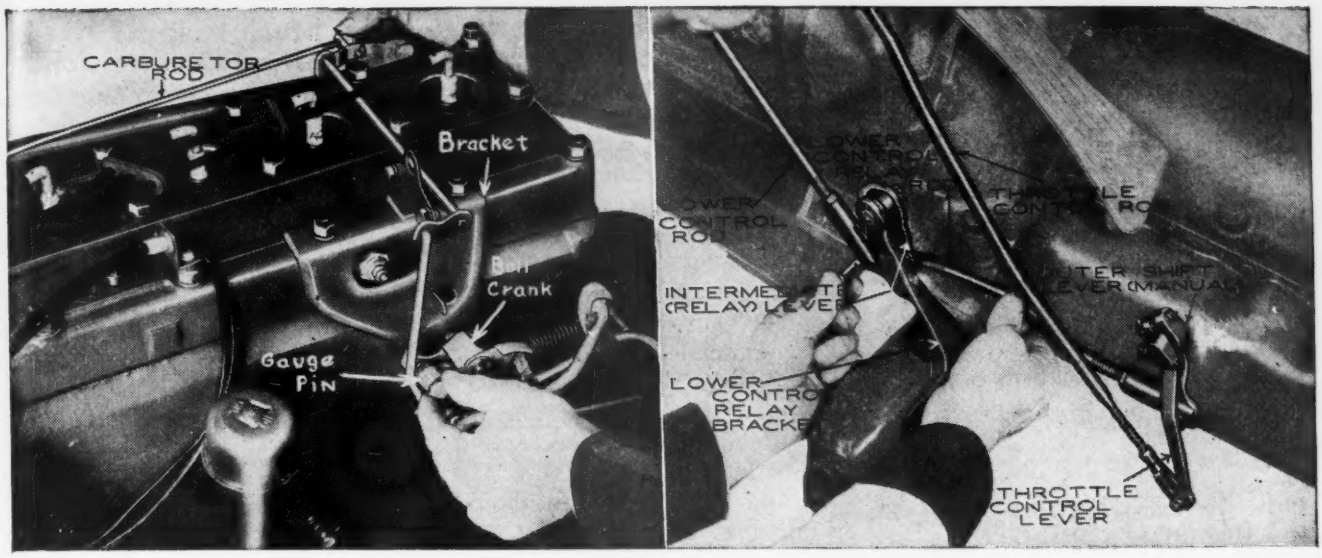
I would suggest you install new gears and examine the relief valve as this may be sticking. It also might be a good idea to make an oil pressure check on this job to see if there is an excessive oil leak in any particular bearing.

1934 Chevrolet Oil Leak Comes and Goes

I have a 1934 Chevrolet Master on which the bearings were tightened and also a new timing gear and gaskets installed. Now every once in a while when I stop the car I find a pool of oil under it.—P. K. Gregory, 5704 S. Vermont Ave., Lon Angeles, Cal.

If the leak is at the rear of the engine it is probably caused by the ball sticking in the rear main bearing cap. I would suggest removing the cap and thoroughly cleaning the oil return hole and would also replace the check ball if pitted or worn.

If the leak is at the front end of the engine, I would remove the timing case cover and examine the oil metering jet that feeds the timing gears. If jet is tight and aimed correctly then install a new balancer and timing case cover seal. Also make sure oil slinger is installed properly.



Left side of Oldsmobile engine showing Hydramatic linkage.

Oldsmobile Hydramatic Shifts Gears Hard

We have a 1942 Oldsmobile Hydramatic. It changes gears very hard. It also misses third gear. Would like some information about the Pontiac Hydramatic (maintenance and adjusting).

Have a 1942 Hudson Six. It pings hard when it pulls a little bit, you have to change gears to stop it. Timing has been retarded but the ping is still there. This car had a new engine installed about two years ago. I don't know what engine was used. The head from the old engine was used.—E. S. Russell, General Delivery, Green River, Wyo.

On your 1942 Oldsmobile on which the Hydramatic transmission shifts with a severe jerk and misses third gear, I would say you do have a problem. The jerky shift is probably caused by improperly adjusted throttle linkage, a bad valve body or rough clutch plates.

To adjust throttle linkage, first set idle speed by warming up engine and making certain the choke is fully released and the fast idle cam is on its slow idle step. Disconnect throttle linkage at transmission lever. Adjust throttle stop screw to idle engine at 375 rpm. Loosen throttle adjusting nut at carburetor and insert a .248 in. dowel rod in correct position. Tighten pin in place in relay arm to hold adjusting nuts at carburetor end of throttle to relay rod and adjust trunnion at throttle valve rod so that pin can be installed freely when lever is against stop. Remove dowel from relay arm.

If the linkage adjustment doesn't improve the shifting then it will be necessary to remove and disassemble the transmission paying particular attention to the valve body and clutch plates.

As to your Hudson pinging on a pull I would suggest removing the cylinder head and examining the combustion chamber for hot spots, also for carbon accumulation. If engine didn't start pinging until recently it would lead me to believe your trouble is probably caused by excessive carbon deposits. If no hot spots are found in the combustion chamber and very little carbon deposits I would suggest installing an additional head gasket to decrease the compression. It might be a good idea to check the distributor vacuum and centrifugal advance on a reliable distributor tester.

Plymouth Oil Pressure Drops on Acceleration

We have trouble with the oil pressure on a 1941 Plymouth. The oil pressure dropped away all at once. We took the pan off and put pressure on the oil line and the mains did not hold the oil very well so we decided to put in a new crankshaft (reground) and bearings, new pump and screen, release plunger and spring, and it does not seem to help much. If you step on foot feed the pressure goes to nothing and if you let up the pressure goes up. You would think there is a leak somewhere the way it acts. We took the pan off again and put the oil pressure on again and it shows no leaks at all. We have tried new gage and line, put in an extra half gallon oil but it does not seem to help.—Ernest Beckering, Edgerton, Minn.

On your 1941 Plymouth on which the oil pressure drops when engine is sped up momentarily and then starts to pump when engine is idled, I would say you have an unusual condition, as the oil pressure usually drops at a constant speed.

I would suggest making another oil test, using 10-W oil, paying particular attention to the camshaft bearings as they are probably worn. Incidentally, there are special devices available to meter the oil supply to *the camshaft bearings which I* would install on this job.

Following is a list of causes for improper oil pressure which I would recommend checking:

CONTINUED ON NEXT PAGE

Broken oil line or tube
Leaky connection in oil tube or lines
Defective oil gage
Oil pressure relief valve sticking
Improper viscosity of oil

Even though the oil pump is new, I would recheck it as it might be defective. Also check the pump cover gasket as some pumps come through with a thick cover gasket instead of a thin one. The thin one is correct.

How to Fit Olds and Pontiac Piston Pins

Will you please send us pin fitting specifications on the Oldsmobile and Pontiac piston pins. —Charles P. Cooper, Oxford Auto Parts, Broad & Third Sts., Oxford, Pa.

Regarding the correct pin fitting specifications on Pontiac and Oldsmobile engines. On the Pontiac the clearance between the pin and bushing should be .0004 to .0006 in. with a press fit of from 200 to 300 lbs. in the piston.

On the Oldsmobile, ream connecting rod bearings until pin can be pushed through with a slight pressure of the thumb.

Recommended procedure for fitting pins to pistons is to insert a 6 in. drift in the piston pin lock screw hole and then forcing the pin in place by twisting pin back and forth. This fit should be made with the solid part of pin in the boss with the split part entirely through the boss.

To install the pistons to the rods heat the pistons in boiling water and insert the cold pin in hot piston as far as possible by hand, then tap lightly until pin is in place.

How Much to Plane Head To Increase Compression

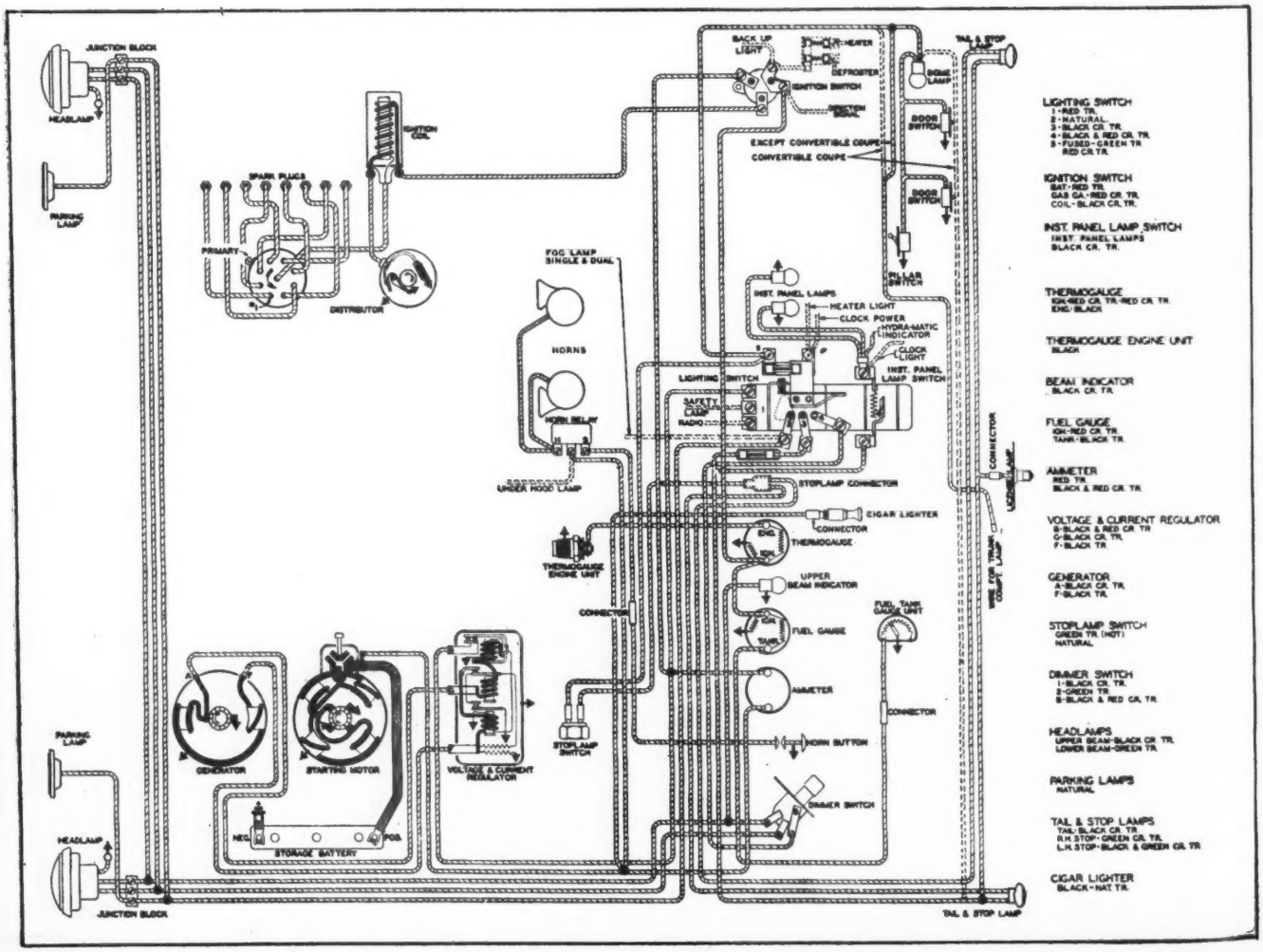
Please advise as to how many thousandths it will be necessary to plane the head of a 1947 Chrysler "6" to raise the compression ratio from normal 6.6 to 7.5. How much can you plane the head satisfactorily and still have clearance between the valves. M. K. Risvold, Risvold Bros. Company, Corwith, Iowa.

The present volume of the combustion chamber is 6.3 cubic inches (compression ratio 6.6 to 1). To increase the ratio it will be necessary to reduce the cubic volume to 5.5 cubic inches (7.5 to 1).

One way of doing this is to set up the head perfectly level upside down and fill one of the combustion chambers with water (or oil) so that it is exactly full. Now remove .8 cubic

CONTINUED ON PAGE 130

Wiring Diagram of all 1948 Pontiac 8 Cylinder models



Current Engine and Tune-Up Specifications

MAKE AND MODEL	Wheelbase (In.)	ENGINE: No. of Cylinders, Bore and Stroke	ENGINE: Taxable Hp.	ENGINE: Piston Displacement (Cu. In.)	ENGINE: Maximum Brake Hp. at Specified R.P.M. (with Bare Engine)	ENGINE: Compression Ratio	TUNE-UP DATA: Compression Pressure at Cranking Speed (Lbs.)	TUNE-UP DATA: Spark Plug Make and Type	TUNE-UP DATA: Rings: No. and Width Compression	TUNE-UP DATA: Rings: No. and Width Oil	TUNE-UP DATA: VALVES: Seat Angle: Inlet	TUNE-UP DATA: VALVES: Seat Angle: Exhaust	TUNE-UP DATA: VALVES: Steam Diameter (In.) Inlet	TUNE-UP DATA: VALVES: Operating Tappet Clearance: Inlet	TUNE-UP DATA: VALVES: Operating Tappet Clearance: Exhaust	TUNE-UP DATA: VALVES: Inlet Tappet Clearance for Valve Tim'g	TUNE-UP DATA: VALVES: Timing: Deg. Inlet Opens Before or After TC	TUNE-UP DATA: VALVES: Timing: Timing Marks Located	TUNE-UP DATA: IGNITION: Breaker Point Gap	TUNE-UP DATA: IGNITION: Cam Angle (Deg.)	TUNE-UP DATA: IGNITION: Spark Plug Gap	TUNE-UP DATA: IGNITION: Timing: Spark Occurs OTC	TUNE-UP DATA: IGNITION: Timing: Timing Marks Located	TUNE-UP DATA: Rods Removed From	TUNE-UP DATA: Crankcase Capacity, Refill (Qts.)	TUNE-UP DATA: Cooling System Capacity (Qts.)	STEERING: Caster (Deg.)	STEERING: Camber (Deg.)	STEERING: Toe-In (In.)	STEERING: King Pin Inclination (Deg.)
Buick.....Eight, 40	121	8-3 3/32x4 1/8	30.6	248.1	110-3600	6.3	112	AC-48	2-1/32	2-(c)	45	45	.372	.015H	.015H	.015	13BT	None	.015	•	.025	4BT	Fly	A	5½	13	+¼ to +1½	+⅞ to −⅝	1/16 to ⅛	4¼†
Buick.....Eight, 50	124	8-3 3/32x4 1/8	30.6	248.1	115-3600	6.6	114	AC-48	2-1/32	2-(c)	45	45	.372	.015H	.015H	.015	13BT	None	.015	•	.025	4BT	Fly	A	5½	13	+¼ to +1½	+⅞ to −⅝	1/16 to ⅛	4¼†
Buick.....Eight, 70	129	8-3 7/16x4 5/16	37.8	320.2	144-3600	6.6	144	AC-48	2-1/32	2-(c)	45	45	.372	.015H	.015H	.015	14BT	None	.015	•	.025	6BT	Fly	A	7	16¾	+½ to +1½	+⅞ to −⅝	1/16 to ⅛	4¼†
Cadillac.Eight,61,62, 60S	(a)	8-3½x4½	39.2	346.0	150-3400	7.2	117	AC-104	2-1/64	1-1/16	45	45	.372	HA	HA	HA	TC	VD	.015	31±	.030	5BT	VD	A	....	25	−½ to +½	−⅜ to +⅜	1/32 to 3/32	5°51′
Cadillac.....Eight, 75	136¼	8-3½x4½	39.2	346.0	150-3400	7.2	117	AC-104	2-1/64	1-1/16	45	45	.372	HA	HA	HA	TC	VD	.015	31±	.030	5BT	VD	A	....	25	−½ to +½	−⅜ to +⅜	1/32 to 3/32	5°51′
Chevrolet....Six, FJ-FK	116	6-3½x3¾	29.4	216.5	90-3300	6.5	.....	AC-M8	2-.123	1-.186	30	30	.340	.006H	.013H	.006H	3BT	Fly	.021	34	.040	5BT	Fly	A	5	15	0±30	−15±30	0 to 1/16	4¾±30′
Chrysler .....Six, C-38	121½	6-3 7/16x4½	28.3	250.6	114-3600	6.6	130	AL-A5	2-3/32	2-3/32	45	45	.341	.008H	.010H	.014	12BT	VD	.020	34½	.025	2AT	VD	A	5	17	−1 to +1	0 to +¾	0 to 1/16	4¾ to 6
Chrysler.....Eight, C-39	127½	8-3¼x4⅞	33.8	323.5	135-3400	6.7	130	AL-A5	2-3/32	2-3/32	45	45	.341	.008H	.010H	.011	12BT	VD	.018	28½	.025	2AT	VD	A	6	26	−1 to +1	0 to +¾	0 to 1/16	4¾ to 6
Chrysler.....Eight, C-40	145½	8-3¼x4⅞	33.8	323.5	135-3400	6.7	130	AL-A5	2-3/32	2-3/32	45	45	.625	.008H	.010H	.011	12BT	VD	.018	28½	.025	2AT	VD	A	6	26	−1 to +1	0 to +¾	0 to 1/16	4¾ to 6
Crosley.....Four, CC-48	80	4-2½x2¼	10.0	44.0	26.5-5400*	7.5	130	AL-A7	2-⅝	2-.155	45	45	.313	.004C	.006C	.009	5BT	.....	.020	46	.025	12BT	Fly	B	2½	4	7½	2	1/64 to 1/16	6½
Davis.....Four, D2	108	4-3¼x4	16.9	133.0	46.5-3200	5.5	.....	CH	2-⅛	1-1/16	....	....	....	....	....	....	....	Fly	....	....	....	....	....	....	....	11	.....	.....	.....	.....
De Soto.....Six, S-11	121½	6-3 7/16x4¼	28.3	236.6	109-3600	6.6	135	AL-A5	2-3/32	2-3/32	45	45	.340	.008H	.010H	.014	12BT	VD	.020	34½	.025	TC	VD	A	5	17	−1 to +1	0 to +¾	0 to 1/16	4¾ to 6
Dodge.....Six, D-24	119½	6-3¼x4⅝	25.3	230.2	102-3600	6.7	130	AL-A5	2-3/32	2-3/32	45	45	.340	.008H	.010H	.014	12BT	VD	.020	34½	.025	2AT	VD	A	5	15	−1 to +1	0 to +¾	0 to 1/16	4¾ to 6
Ford.....Six, 87HA	114	6-3.3x4.4	26.1	226.0	90-3300	6.7	161	CH-H10	2-.092	2-.186	45	45	.310	.014	.014	.015	5BT	▲	.015	36	.025	1BT	None	A	5	14½	4½ to 9	¼ to 1	0 to 1/16	8
Ford.....Eight, 89A	114	8-3 1/16x3¾	32.5	239.4	100-3800	6.7	115	CH-H10	2-.092	2-.154	45	45	.310	.011	.015	.015	TC	DH	.015	36	.026	4BT	None	A	5	22	4½ to 9	¼ to 1	0 to 1/16	8
Frazer...Six, F485-F486	123½	6-3 5/16x4⅜	26.3	226.2	100-3600	7.3	120	AL-A5B	2-.093	2-.154	30	45	.341	.014C	.014C	.014	10BT	VD	.022	38	.032	TC	VD	A	5	15	+1 to −1	0 to +¾	0 to 1/16	5½ to 6
Hudson....Six, 481-482	123⅞	6-3 5/16x4⅜	30.4	262.0	121.4000	6.5	.....	CH-J9	2-.078	2-(r)	45	45	.341	.010H	.012H	.....	.....	Fly	.020	38	.032	TC	Fly	A	7	18	0±¼	½±¼	1/32±1/32	3°36′
Hudson...Eight, 483-484	123⅞	8-3x4½	28.8	254.0	128-4200	6.5	119	CH-H10	2-.093	2-(r)	45	45	.341	.006H	.008H	.....	10⅔BT	Fly	.....	27	.032	TC	Fly	A	7	18	0±¼	½±¼	1/32±1/32	3°36′
Kaiser..Six, K481-K482	123½	6-3 5/16x4⅜	26.3	226.2	100-3600	7.3	120	AL-A5B	2-.093	2-.154	30	45	.341	.014C	.014C	.014	10BT	FVD	.022	38	.032	TC	VD	A	5	15	+1 to −1	0 to +¾	0 to 1/16	5½ to 6
Lincoln...Twelve, 876H	125	12-2⅞x3¾	39.6	292.0	125-3600	7.2	.....	CH-H9	2-.093	1-.186	45	45	.310	HA	HA	HA	10.4BT	TG	.015	36	.027	2BT	None	A	5	24½	3 to 5	¼ to ¾	0 to 1/16	.....
Mercury.....Eight, 89M	118	8-3 3/16x4¾	32.5	239.4	100-3800	6.7	160	CH-H10	2-.091	2-.154	45	45	.311	.011	.015	.015	TC	DH	.015	36	.026	4BT	None	A	5	22	7¼	1	1/16	8
Nash.....Six, 4840	112	6-3⅛x3¾	23.4	172.6	82-3800	7.0	120	AL-A5	2-.093	1-.186	44	44	.341	.015	.015	.019	6BT	None	.020	....	.025	TC	VD	A	5	14	¼ to ¾	½ to ¾	⅛ to 3/16	7
Nash.....Six, 4860	121	6-3⅜x4⅜	27.3	234.8	112-3400	7.0	125	AC-44	2-.093	2-.154	44	44	.372	.015	.018	.022	4½BT	.....	.020	....	.025	TC	VD	A	6	17	0 to −½	¼ to ¾	1/16 to 1/16	5
Oldsmobile...Six, 66, 76	119	6-3½x4⅛	29.4	238.1	100-3400	6.5	159	AC-45	2-1/32	2-1/16	30	45	.342	.008H	.011H	.012	5BT	None	.020	35	.030	TC	Fly	A	5	18½	0 to −¾	−¼ to +¾	1/16 to ⅛	4°51′10″
Oldsmobile.Eight, 68, 78	125	8-3¼x3⅞	33.8	257.1	110-3600	6.5	165	AC-45	2-1/32	2-1/16	30	45	.342	.008H	.011H	.012	TC	None	.015	31	.030	2BT	Fly	A	6	20½	0 to −¾	−¼ to +¾	1/16 to ⅛	4°51′10″
Oldsmobile.....Eight, ...Futuramic 98	125	8-3¼x3⅞	33.8	257.1	115-3600	7.0	182	AC-45	2-1/32	2-1/16	30	45	.342	.008H	.011H	.012	TC	None	.015	31	.030	2BT	Fly	A	6	20½	0 to −¾	−¼ to +¾	1/16 to ⅛	4°51′10″
Packard..Eight & Del. 8	120	8-3½x3¾	39.2	288.0	130-3600	7.0	.....	(k)	2-(l)	1-.186	30	45	.341	.007H	.010H	.012	10BT	.....	.017	27	.028	6BT	.....	A	6	18	0±¼	−1±½	0+1/16−0	5°50′
Packard....Super Eight	120	8-3½x4¼	39.2	327.0	145-3600	7.0	.....	(k)	2-(l)	1-.186	30	45	.341	.007H	.010H	.012	10BT	.....	.017	27	.028	6BT	.....	A	6	20	0±¼	−1±½	0+1/16−0	5°50′
Packard...Custom Eight	127	8-3½x4⅝	39.2	356.0	160-3600	7.0	.....	(k)	2-(l)	1-.186	30	45	.341	AA	AA	No	4BT	.....	.017	27	.028	6BT	.....	A	7	20	0±¼	−2±½	0+1/16−0	5°50′
Playboy.....Four, A-48	90	4-2⅞x3½	13.2	91.0	40-3600	7.5	.....	CH-C8	2-.093	1-.249	30	45	.314	.012H	.012H	.....	TC	.....	.....	.....	.025	TC	Fly	A	3½	10	7	2	.....	12″
Plymouth.....Six, P-15	117	6-3¼x4⅜	25.3	217.8	95-3600	6.6	120	AL-5	2-3/32	2-3/32	45	45	.340	.008H	.010H	.014	12BT	VD	.020	36½	.025	TC	VD	A	5	15	−1 to +1	0 to +¾	0 to 1/16	4¾ to 6
Pontiac.....Six, 25, 26	(f)	6-3 5/16x4	30.4	239.2	93-3400	6.5	160	AC-45	2-1/32	1-3/16	30	45	.312	.012H	.012H	.012	5BT	CC	.020	37	.025	4BT	Fly	A	5	18	−½ to −1	0	0 to 1/16	5
Pontiac....Eight, 27, 28	(f)	8-3¼x3¾	33.8	248.9	107-3700	6.5	158	AC-45	2-1/32	1-3/16	30	45	.312	.012H	.012H	.012	5BT	CC	.015	31	.025	4BT	Fly	A	5	19½	−½ to −1	0	0 to 1/16	5
Studebaker.....Six, 7G	112	6-3x4	21.6	169.6	80-4000	6.5	105	CH-J7	2-(g)	1-3/32	45	45	.312	.016C	.016C	.020	15BT	FVD	.020	38	.025	2BT	FVD	A	5	10	+1½	½±¼	1/16 to ⅛	5½
Studebaker.....Six, 15A	119	6-3 5/16x4⅜	26.3	226.2	94-3600	6.5	105	CH-J7	2-1/32	1-3/16	45	45	.343	.016C	.016C	.020	15BT	FVD	.020	38	.025	2BT	FVD	A	6	13	−2 to −3	½±¼	1/16 to ⅛	5½
Willys.....Six, 663	104	6-3x3½	21.6	148.5	72-4000	6.4	110	AL-A7-F	2-1/32	1-3/16	45	45	.340	.014	.014	.....	5BT	.....	.020	34½	.030	TC	.....	A	5	12	1	1	1/16 to ⅛	5

ABBREVIATIONS

*—With Standard Accessories
±—Plus or Minus 1½°
†—At ⅜° Camber
▲—Depression in Camshaft Gear
●—Do not recommend using a dwell meter for checking point opening

(a)—Models 61 and 62—126 in., Model 60S—133 in.
(c)—Upper Ring 3/16 in., Lower Ring .1860 in.
(f)—Models 25 and 27—119 in., Models 26 and 28—122 in.

(g)—Top Ring 1/32; Middle Ring ⅛
(k)—Auto-Lite P4 or AC104 or Champion 4A
(l)—No. 1—.093; No. 2—.1235
(r)—Upper 1/16; Lower 1/32

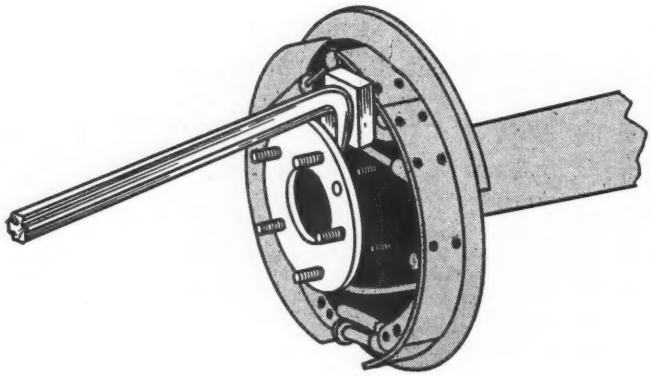
A—Rods removed from above
AA—Automatic Adjustment
AC—AC Spark Plug Div.
AL—The Electric Auto-Lite Corp.
AT—After Top Center
B—Rod removed from below

BT—Before Top Center
C—Cold
CC—Crankshaft and Camshaft Sprockets
CH—Champion Spark Plug Co.
DH—Distributor Housing
Fly—Flywheel

FVD—Flywheel Vibration Damper
N—Negative
TC—Top Center
TG—Timing Gears
VD—Vibration Damper

SHOP KINKS $25★

FOR THE BEST KINK PUBLISHED EACH MONTH



Handy Tool Aids in Pulling Rear Axle Shafts

I am sending you a sketch of a tool that I made to pull rear axle shafts out of Pontiacs and Oldsmobiles.

The tool is easily made from a wrecking bar or crow bar, as the sketch shows. The bar can be bought in any parts house. In using it insert a block of wood about 2 inches thick between the backing plate and the tool. ***S. W. Schott, 35 So. State, Westerville, Ohio.***

Adjusting Parking Brake Cables on Oldsmobiles

After adjusting parking brake cables on late model Oldsmobiles I have found an easy way to hold the slack out of both cables so the clevis pin will go back in through both clevises and the coupling.

I pull one cable up against the spring tension until all slack is out and then clamp the vise grip plier on the cable right where it leaves the conduit so it cannot spring back. Do the same with the other cable then replace the clevis pin through both clevises and the coupling and release vise grips. This pin is tough to line up unless both cables are free of spring tension. *Charles Jones, 528 W. Allen Street, Springfield, Illinois.*

Hand Mirror Helps In Replacing Car Windows

In putting in windows on Chrysler cars that use the snap type lock ring to hold the regulator in place, I just hold a small hand mirror behind the regulator and see exactly where the lock is supposed to be placed. This trick also helps in removal of the lock.—*William Kutemayer, 330 E. Park Place, Collinsville, Ill.*

Surer than the races, steadier than hitting the jackpot. The faster you write 'em, the richer you get. 25 bucks for one lucky fellow! So grab your pencil and spike at least a fin. Send along your idea—write it or draw it, anyway that we can understand it—some short cut to make a job easier or faster, some special tool you can't buy, some kink of your own. Of course, we won't accept any printed by any other publication.

Ford Hanger Stud Tool Made From Star Drill

Removing Ford spring hanger studs can be simplified by the use of a tool made from a 3/8 in. star drill. Grind the star drill as illustrated, dotted edges showing parts to be ground away.

In using this tool, first drive out the core of the stud. On some models the front ones will have to be bent down with a pry bar, after driving core of stud half way through the shell, in order to clear the front axle. After the core is removed, the special tool can be used to drive out the shell. This tool can be used equally as well to remove Ford cylinder sleeves. I have used this tool for years and have not as yet found a better way for spring hanger studs and steel sleeves. — *Fred Detogawa, 761 Merchant St., Los Angeles, Cal.*

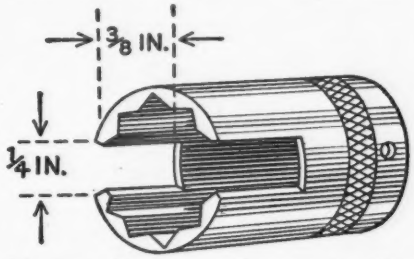
Satisfactory Substitute For Dust Covers

It is sometimes necessary to remove tie rod and drag link ends, and in the removal thereof, the dust shields or covers are usually ruined. Satisfactory substitutes may be made for these shields by slicing 1/4 in. or thicker pieces of heater hose and slipping these over the taper when replacing sockets.

Similar pieces of hose may be used for holding spark plug wires in neat arrangement.—*Robert H. Garrett, Dawson, Ill.*

Old Socket Speeds Off Rusty Wing Nuts

Here's a handy tool made from a cracked or worn 3/4 in. drive socket. With a hack saw cut out section about 1/4 in. wide and



3/8 in. deep as shown in the sketch. If the socket is cracked, widen the crack to serve as one cut.

On a speed handle it beats anything for removing those corroded wing nuts on a battery hold down bracket on some cars. Slip it on an extension and 90 per cent of your work is done in opening those hard to get at radiator drain cocks on some older cars. — *Edward Gorgas, 1021 Becker St., New Castle, Pa.*

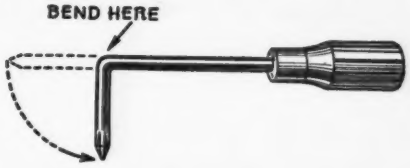
Masking Tape Aids In Removing Needle Bearings

When removing needle bearing universals and drive shaft for clutch and transmission jobs, I run a strip of masking tape around the universals before taking bolts out.

The tape is not in the way of bolts and shaft can be moved around without danger of spilling needles.—*Elmer Christensen, 5734 S. Whipple St., Chicago 29, Ill.*

An Offset Screw Driver For Phillips Screws

To loosen and tighten Phillips screws on doors of autos that are very hard to loosen or tighten,



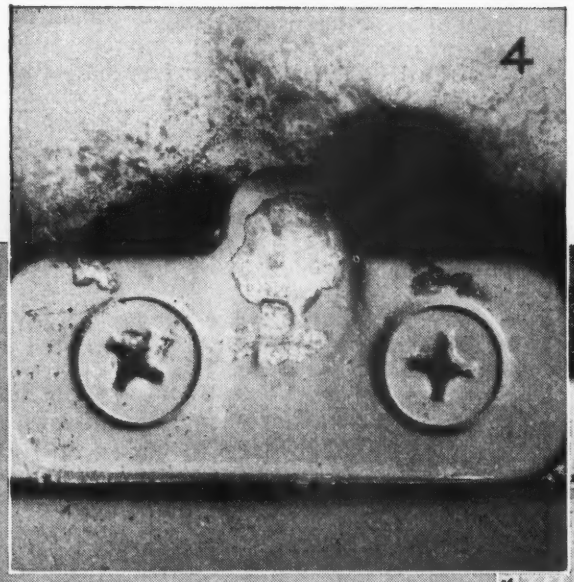
take an ordinary large-sized Phillips screw driver and bend it square about 3 inches or 3½ inches from the end or tip. This gives extra leverage needed.

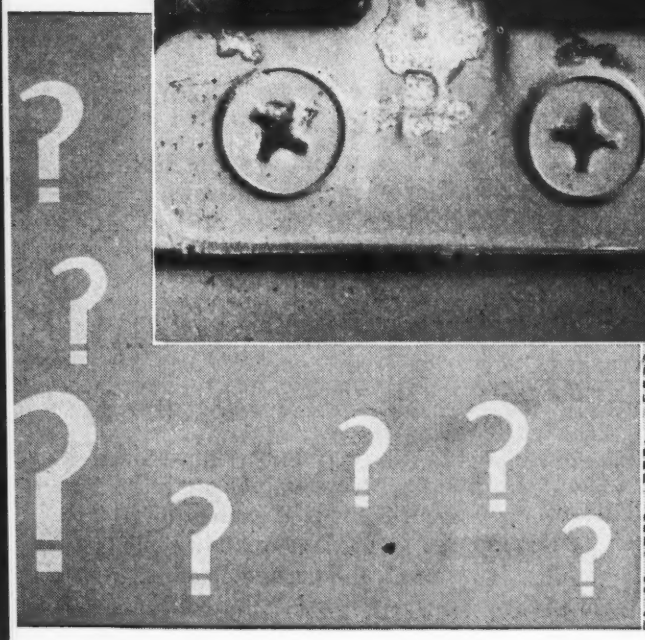
In other words, the tool is like an off set wrench and has a good leverage. *Anthony L. DeCesare, 32-50 48th Street, Long Island City 3, New York.*

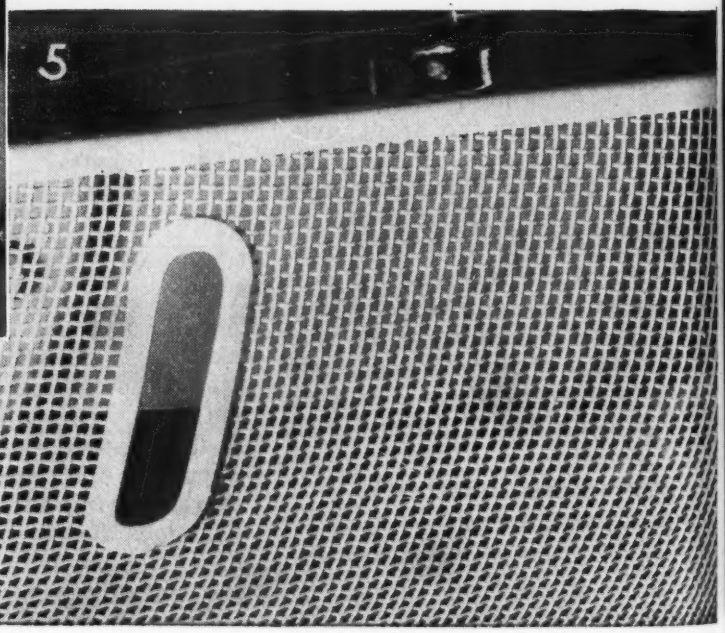
Here is a quiz that should be easy —

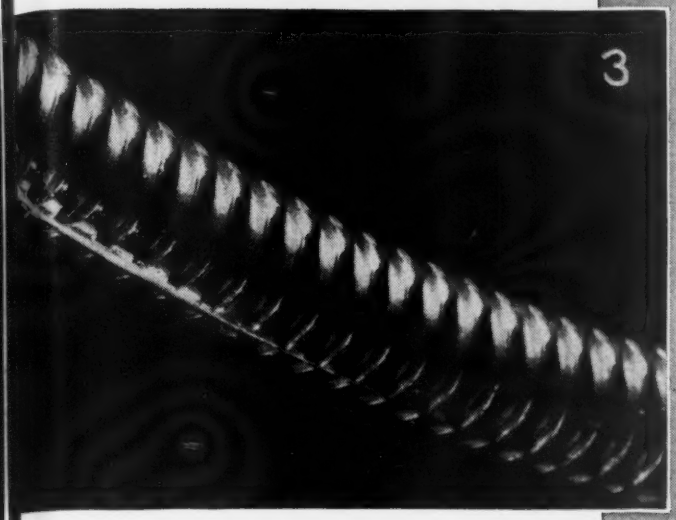
PUT your wits up against the guy who claims to know all about it, and see who has the greatest imagination.

Seeing is believing, but it's all in the way you look at it. Take these views, for instance. Would you believe that picture number two is a large capacity radiator? It may





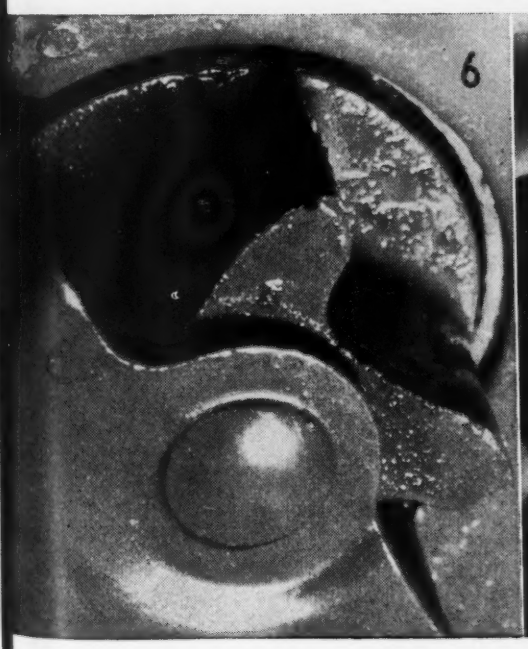




What's This?

For someone who's nearsighted

appear that way, but these photographs are deceiving. Try these eight and then check your answers with the correct answers found on page 100. The people who claim to be most familiar with automobiles may falter on a quiz of this type as well as a person with average automotive knowledge, for a seal-beam unit under these conditions may look like a big round swimming pool. For instance, Number three is obviously a piece of defroster hose, but there's no heater around with which to associate the relative parts, so maybe that guess is wrong. Six out of eight right passes in this school.



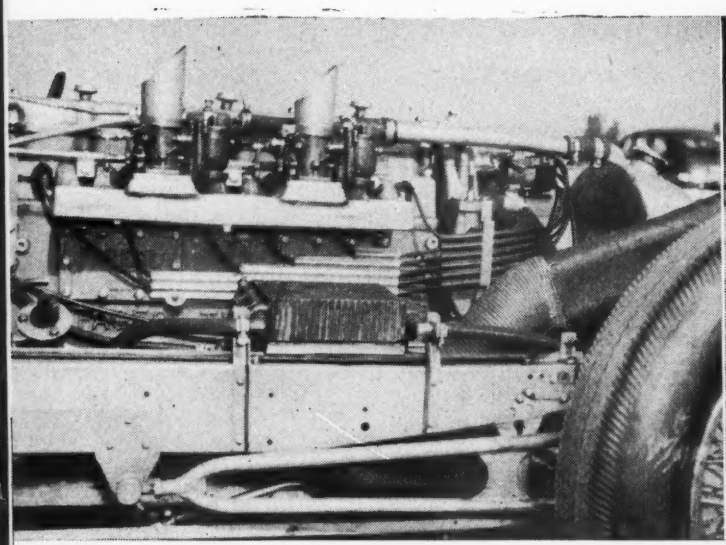
Mechanical Close-up . . . CONTINUED FROM PAGE 39

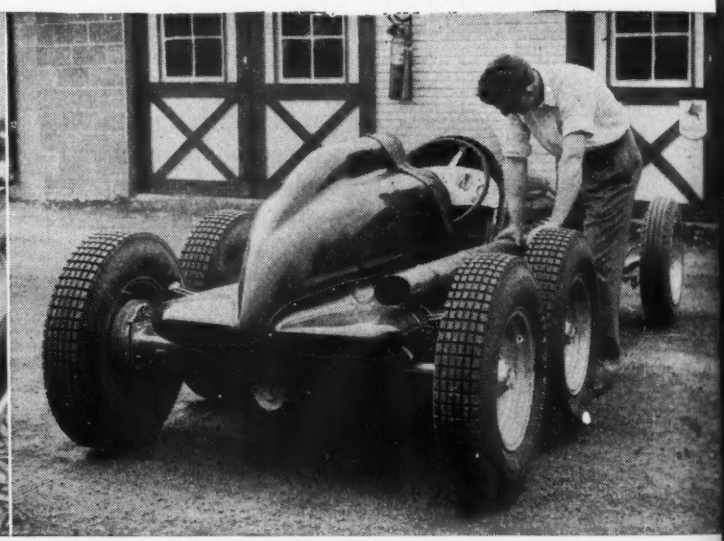
Hellings fifth, Hal Cole sixth, Lee Wallard seventh, Tommy Hinnershitz eighth, Johnny Mauro ninth and Charles Van Acker tenth.

That Lou Moore's Blue Crown Specials should capture the first two positions two years in succession, clearly indicates the thoroughness and precision with which these cars were prepared. Out of 33 starters only twelve cars were running at the finish and three of these were flagged before completing the 500 miles.

The causes of withdrawal always of major interest to the race fan who is also a mechanic, were varied this year. Harry McQuinn's car left the race with a broken Supercharger shaft. Emil Andres with steering trouble. Doc Williams with spark plug trouble. Paul Russo with an oil leak. George Connor with a broken universal joint. Spider Webb with a broken oil line. Sam Hank with clutch trouble. Duane Carter with a broken axle and blown tire. (Mel Hansen's car did not have enough speed). Fred Agabashian with broken oil line. Les Anderson with broken rear. Chet Miller with oil trouble. Jack McGrath with spark plug trouble. Rex Mays running in first and second place up to the 128th lap was forced to pull into the pits with a leaky fuel tank. Rex's car was performing perfectly and would have given the winners plenty of trouble. Bill Cantrel with a broken steering arm. Cantrel's car, the Fageol Twin

CONTINUED ON PAGE 112

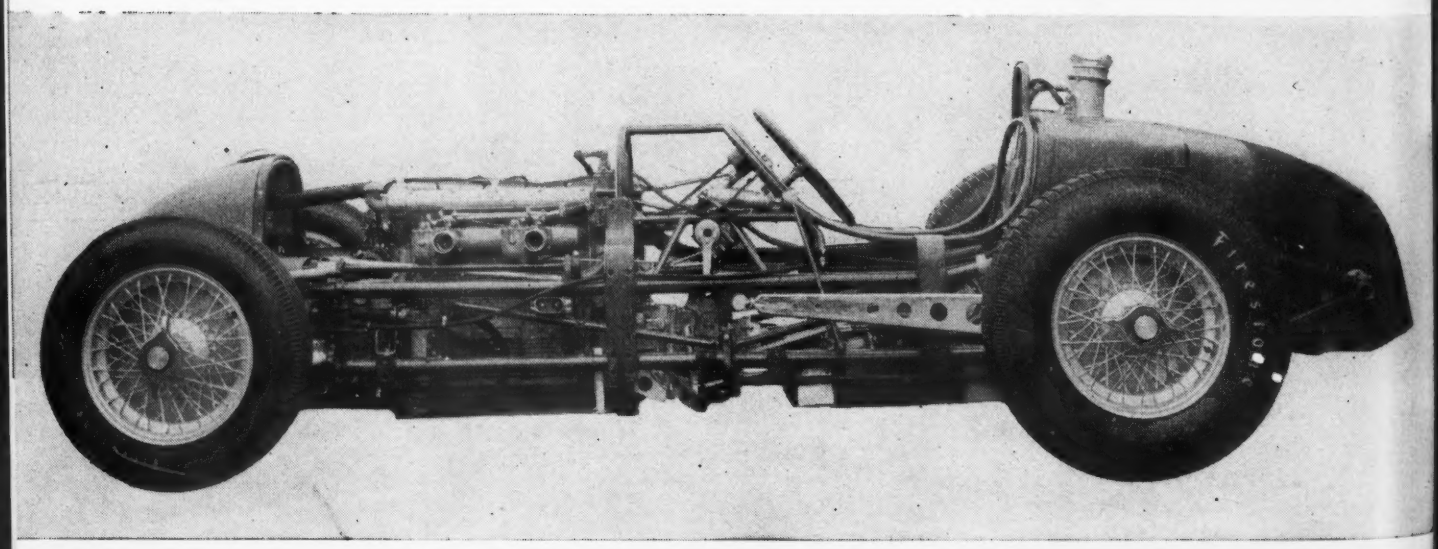


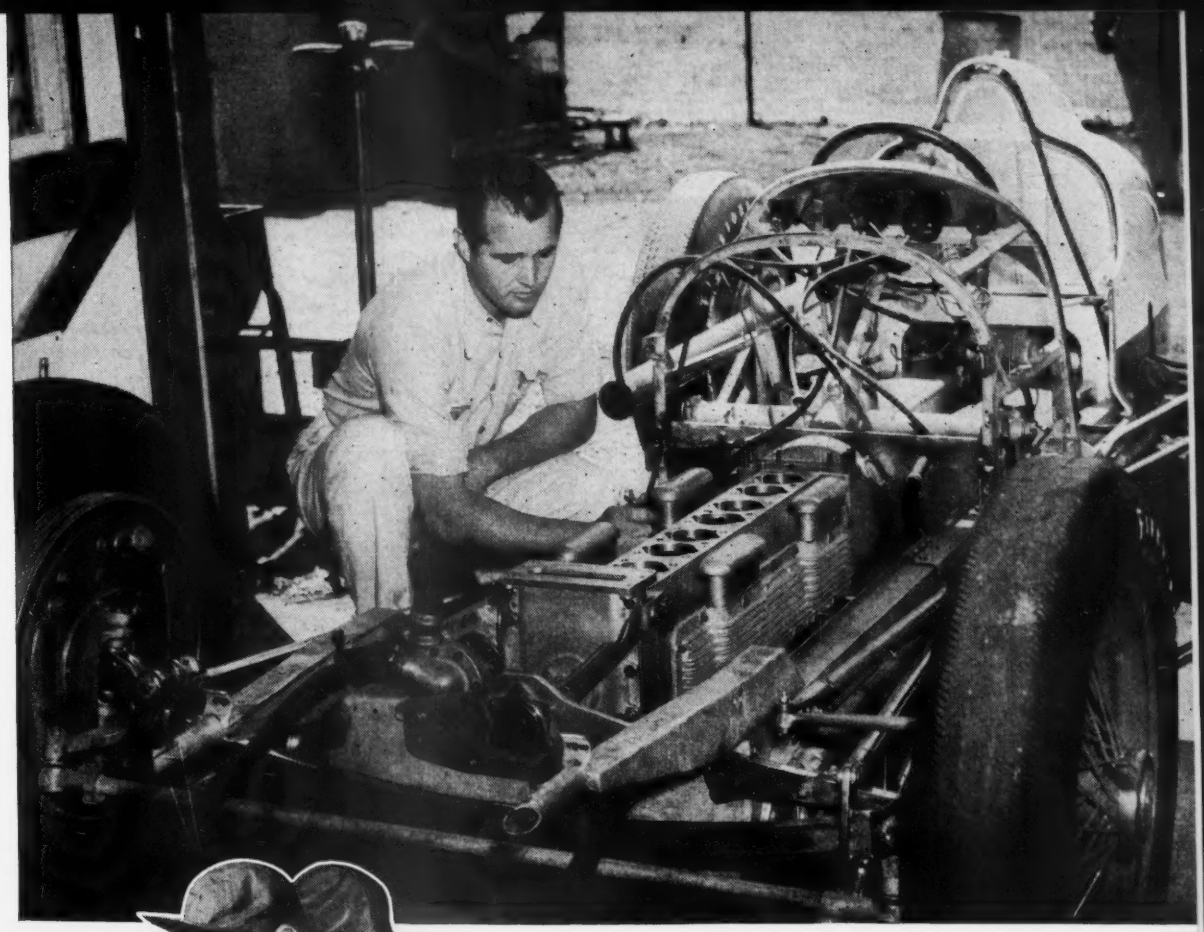


Above. Lou Fageol's semi-stock engine with dual carburetors and oil cooler.

Below. Lou Fageol's chassis. Note the torsion springing and distance of the radiator from the engine.

Pat Clancy's newly designed six wheel job. The extra rear wheels are designed to prevent skidding.

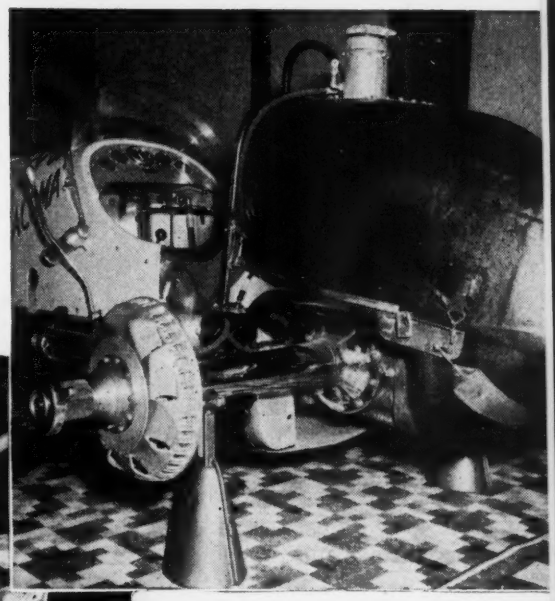




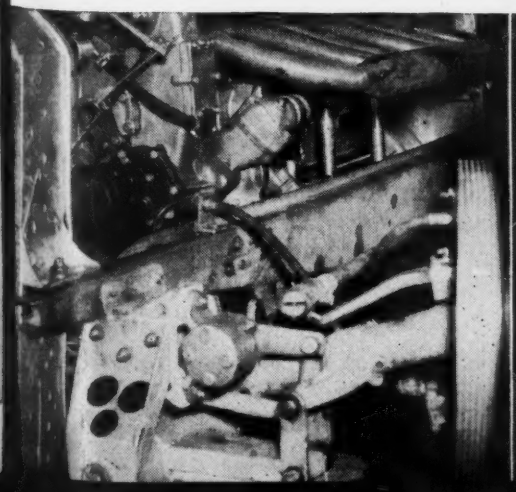
Above. Pete Clark, head mechanic for the Bowes Seal Fast Special in which Rex Mays drove, getting engine in shape

Left. Hal Cole's mechanic putting finishing touches to his Offenhauser, 270 cu. in. engine.

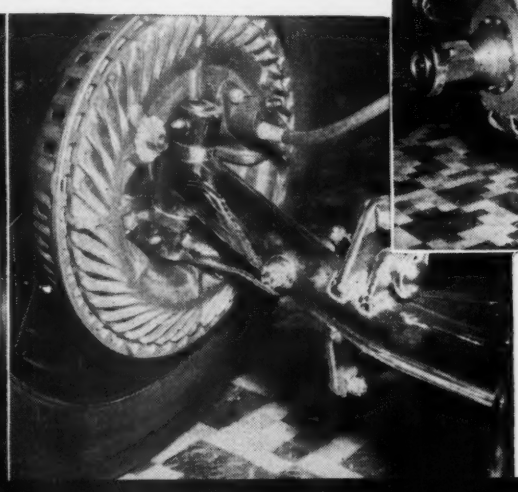
Below. The puncture proof gas tank like Hal Cole's shown here is also a wartime development adopted by race car designers.

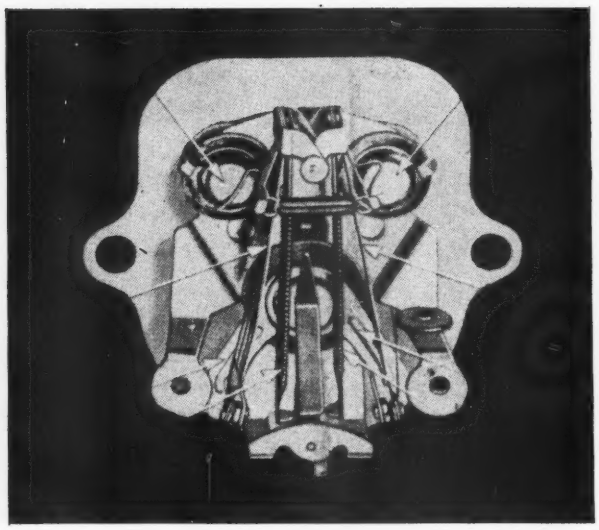


Below. Torsilastic suspension used on Lou Fageol's car was an outgrowth of tanks suspension in the war.

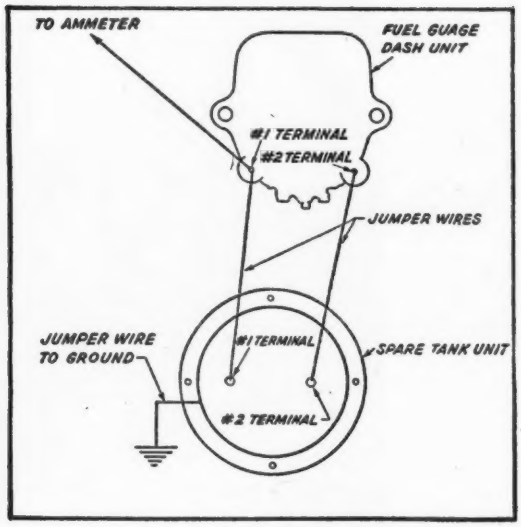


Air-cooled front brake drums on Hal Cole's car, with cooling fins of alumninum, similar to aircraft design.



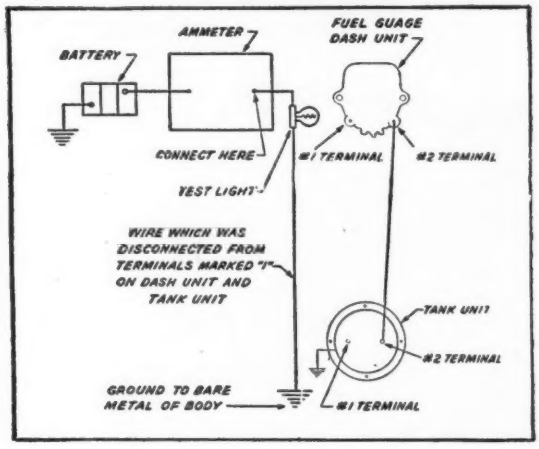


Inside view of Plymouth dash unit showing pointer and contact points.



Above: Wiring diagram showing method of testing dash unit with tank unit known to be operative.

Below: Wiring diagram illustrating test for grounds or open circuits.



Servicing Plymouth Fuel Gages

A systematic test procedure can save time and help to remove the mystery often involved in fuel gage troubles

When servicing fuel gages, the first thing to determine is which unit may be at fault, the tank or dash. Most common causes of gage failure are as follows:

1. Open circuits due to loose wiring.
2. Grounded circuit due to broken insulation allowing wires to touch bare metal.
3. Reversed wire connections at dash or tank unit.
4. Short circuited radio suppressor (if suppressor is attached to dash unit).
5. Internal trouble with the dash unit or tank unit.

If the dash unit is at fault and has not been short circuited or burned out, the contact points can be cleaned by drawing a piece of sandpaper between the points. If the pointer fluctuates on the dash unit, cleaning the points will usually correct this condition. Never attempt to repair the tank unit. If this gage is faulty, replace it with a complete unit.

To check the dash unit, disconnect the tank unit and try another unit which is known to

CONTINUED ON PAGE 104

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of April 1. State or local taxes, transportation and finance charges and optional equipment are extra.

BODY, MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK				
Series 40				
Sedanet, 2nd	$1497	$114	$1611	3670
Sedan, 4d.	1556	117	1673	3720
Series 50				
Sedanet, 2d.	1708	135	1843	3795
Sedan, 4d.	1790	139	1929	3910
Convertible Coupe, 2d.	2175	158	2333	4050
Estate Wagon	2622	183	2805	4170
Series 70				
Sedanet, 2d.	1968	163	2131	4095
Sedan, 4d.	2065	167	2232	4190
Convertible Coupe	2463	188	2651	4345
Estate Wagon	3030	219	3249	4445
CADILLAC				
Series 61				
Club Coupe, 2d.	.....	.....	2511	4080
Touring Sedan, 4d.	.....	.....	2647	4165
Series 62				
Club Coupe, 2d.	.....	.....	2719	4145
Convertible Coupe, 2d.	.....	.....	3174	4455
Touring Sedan, 4d.	.....	.....	2781	4235
Series 60-Special				
Touring Sedan, 4d.	.....	.....	3506	4370
Series 75				
Business Sedan, 9p.	.....	.....	4368	4790
Touring Sedan, 4d.	.....	.....	4471	4875
Business Imperial, 9p.	.....	.....	4560	4800
Sedan, 4d., 7p.	.....	.....	4686	4895
Imperial, 7p.	.....	.....	4887	4930
CHEVROLET				
Stylemaster-EJ				
Business Coupe, 2d.	1080	80	1160	3050
Sport Coupe, 2d.	1120	82	1202	3060
Town Sedan, 2d.	1135	84	1219	3075
Sport Sedan, 4d.	1190	86	1276	3130
Fleetmaster-EK				
Sport Coupe	1195	86	1281	3090
Town Sedan, 2d.	1200	86	1286	3125
Sport Sedan, 4d.	1255	90	1345	3185
Cabriolet	1525	103	1628	3390
Station Wagon	1775	118	1893	3465
Fleetline-EK				
Aerosedan	1225	88	1313	3125
Sedan	1280	91	1371	3150
CHRYSLER				
Royal-Six				
Coupe, 2d., 3p.	1561	87	1648	3373
Sedan, 2d.	1626	90	1717	3458
Club Coupe, 2d.	1651	91	1742	3443
Sedan, 4d.	1661	92	1753	3523
Sedan, 8p.	2043	112	2155	3977
Limousine, 8p.	2163	119	2282	4022
Windsor-Six				
Coupe, 2d., 3p.	1611	89	1700	3383
Sedan, 2d.	1691	93	1784	3468
Club Coupe, 2d.	1701	94	1795	3448
Sedan, 4d.	1711	94	1805	3528
Sedan Traveler	1846	102	1948	3610
Convertible Coupe	1991	109	2100	3693
Sedan, 8p.	2093	115	2208	3977
Limousine, 8p.	2213	121	2334	4052
Saratoga-Eight				
Coupe, 2d. 3p.	1873	103	1976	3817
Sedan, 2d.	1948	106	2054	3900
Club Coupe, 2d.	1958	107	2065	3930
Sedan, 4d.	1973	108	2081	3972
New Yorker-Eight				
Coupe, 2d., 3p.	1973	108	2081	3837
Sedan, 2d.	2048	112	2160	3932
Sedan, 4d.	2073	113	2186	3987
Convertible Coupe	2323	126	2449	4132
Town & Country-8				
Sedan, 4d.	2496	136	2632	4300
Convertible Coupe	2873	155	3028	4332
Crown Imperial-8				
Sedan, 8p.	3905	207	4112	4865
Limousine, 8p.	4005	212	4217	4875
CROSLEY				
Sedan, 2d.	888	.....	.....	1115
Convertible	949	.....	.....	1110
DE SOTO				
DeLuxe				
Coupe, 2d., 3p.	1451	80	1531	3323
Sedan, 2d.	1516	84	1600	3418
Club Coupe	1541	85	1626	3413
Sedan, 4d.	1551	86	1637	3448
Custom				
Sedan, 2d.	1581	87	1668	3443
Club Coupe, 2d.	1591	88	1679	3398
Sedan, 4d.	1601	88	1689	3453
Convertible Coupe, 2d.	1891	104	1995	3638
Sedan, 8p.	1893	109	2092	3837
Limousine, 8p.	2103	115	2218	3995
Suburban	2283	125	2408	4012
DODGE				
DeLuxe				
Coupe, 2d., 3p.	1347	75	1422	3146
Sedan, 2d.	1417	78	1495	3236
Sedan, 4d.	1457	81	1538	3256
Custom				
Club Coupe	1502	83	1585	3241
Sedan, 4d.	1507	83	1590	3281
DODGE (Continued)				
Town Sedan	$1577	$ 87	$1664	3331
Convertible Coupe	1812	99	1911	3461
Sedan, 8p.	1861	103	1964	3757
FORD				
DeLuxe Six				
Coupe, 2d.	1078	76	1154	3033
Tudor	1133	79	1212	3183
Fordor	1188	82	1270	3213
Super DeLuxe Six				
Coupe	1170	81	1251	3033
Tudor	1225	84	1309	3183
Sedan Coupe	1245	85	1330	3133
Fordor	1285	87	1372	3233
Deluxe Eight				
Coupe	1150	80	1230	3066
Tudor	1205	83	1288	3216
Fordor	1260	86	1346	3246
Super DeLuxe-Eight				
Coupe	1245	85	1330	3066
Tudor	1295	87	1382	3216
Sedan Coupe	1320	89	1409	3166
Fordor	1350	90	1440	3266
Conv. Club Coupe	1635	105	1740	3266
Station Wagon	1855	117	1972	3520
Sportsman	2150	132	2282	3366
FRAZER				
Sedan, 4d.	2152	212	2364	3375
Manhattan Sedan	2550	286	2836	3375
HUDSON				
Super Six-171				
Coupe, 2d., 3p.	1762	128	1890	.....
Brougham, 2d.	1822	131	1953	.....
Club Coupe	1867	133	2000	.....
Sedan, 4d.	1870	133	2003	.....
Convertible Brougham	.....	.....	.....	.....
Commodore Six-172				
Club Coupe	1997	140	2137	.....
Sedan, 4d.	2020	141	2161	3540
Super Eight-173				
Club Coupe	1947	142	2089	.....
Sedan, 4d.	1950	142	2092	.....
Commodore Eight-174				
Club Coupe	2077	149	2226	.....
Sedan, 4d.	2100	150	2250	3600
Convertible Brougham	.....	.....	.....	.....
KAISER				
Sedan, 4d.	1967	207	2174	3302
LINCOLN				
Coupe, 6p.	2360	163	2523	4032
Sport Sedan	2395	165	2560	4090
Convertible, 6p.	2760	183	2943	4365
Cosmopolitan:				
Coupe, 6p.	2925	192	3117	4372
Sport Sedan	2975	195	3170	4400
Town Sedan	2975	195	3170	4420
MERCURY				
Coupe, 6p.	1855	121	1976	3399
Sport Sedan, 4d.	1875	122	1997	3458
Convertible, 6p.	2225	140	2365	3699
Station Wagon	2495	155	2650	3758
NASH				
600 Series				
Bus. Coupe	1298	101	1399	2635
Brougham, 2d.	1358	101	1459	2731
Slip, Sedan, 4d.	1363	101	1464	2826
Trunk Sedan, 4d.	1407	101	1508	2786
Brougham, Cust., 2d.	1538	110	1648	2731
Slip. Sedan, Cust., 4d.	1543	110	1653	2826
Trunk Sedan, Cus., 4d.	1587	110	1697	2786
Ambassador				
Brougham, 2d.	1642	121	1763	3312
Slip. Sedan, 4d.	1659	120	1779	3412
Trunk Sedan, 4d.	1701	120	1821	3387
Slip. Sedan, Cus., 4d.	1839	129	1968	3412
Trunk Sedan, Cus., 4d.	1881	129	2010	3387
Brougham, Cus., 2d.	1883	69	1952	3312
Surb. Sedan, 4d.	2097	142	2239	3522
Convertible	.....	.....	2250	.....
OLDSMOBILE				
Series 66-Six				
Club Coupe	1385	103	1488	3240
Club Sedan	1410	103	1513	3285
Sedan, 4d.	1450	106	1556	3320
Club Coupe, DeLuxe	1520	108	1628	.....
Club Sedan, DeLuxe	1545	110	1655	.....
Sedan, DeLuxe, 4d.	1585	112	1697	.....
Convertible Coupe	1725	120	1845	3550
Station Wagon	2305	151	2456	.....
Series 76-Six				
Club Sedan	1475	109	1584	3425
Sedan, 4d.	1545	114	1659	3500
Club Sedan, DeLuxe	1615	116	1731	3445
Sedan, DeLuxe, 4d.	1685	120	1805	3535
Series 68-Eight				
Club Coupe	1440	106	1546	3355
Club Sedan	1465	107	1572	3420
Sedan, 4d.	1505	109	1614	3445
Club Coupe, DeLuxe	1575	112	1687	.....
Club Sedan, DeLuxe	1600	113	1713	.....
Sedan, DeLuxe, 4d.	1640	115	1755	.....
Convertible Coupe	1780	123	1903	3660
OLDSMOBILE (Continued)				
Station Wagon	$2360	$154	$2514	.....
Series 78-Eight				
Club Sedan	1530	113	1643	3545
Sedan, 4d.	1600	117	1717	3625
Club Sedan, DeLuxe	1670	119	1789	3590
Sedan, DeLuxe, 4d.	1740	123	1863	3665
Series 98-Eight				
Club Sedan	1790	130	1920	.....
Sedan, 4d.	1860	133	1993	.....
Club Sedan, DeLuxe	1890	134	2024	3685
Sedan, DeLuxe, 4d.	1960	138	2098	3745
Conv. Coupe, DeLuxe	2310	156	2466	4035
PACKARD—1948				
Eight-2201				
Club Sedan	1998	127	2125	3750
Touring Sedan	2022	128	2150	3820
Station Sedan	3161	189	3350	4080
DeLuxe Eight-2211				
Club Sedan	2212	138	2350	3770
Touring Sedan	2235	140	2375	3850
Super Eight-2202				
Club Sedan	2505	160	2665	3810
Touring Sedan	2529	161	2690	3880
Conv. Victoria Coupe	2990	185	3175	4025
Super Eight-2222				
Touring Sedan, 7p.	3109	191	3300	.....
Limousine, 7p.	3252	198	3450	.....
Sedan, DeLuxe, 7p.	3442	208	3650	.....
Limousine, DeLuxe, 7p.	3584	216	3800	.....
Custom Eight-2206				
Club Sedan	3413	212	3625	4140
Touring Sedan	3461	214	3675	4210
Conv. Victoria Coupe	3860	235	4095	4380
Custom Eight-2226				
Touring Sedan, 7p.	4250	254	4504	.....
Limousine, 7p.	4406	262	4668	.....
PLYMOUTH				
DeLuxe				
Coupe, 3p.	1139	66	1205	2977
Sedan, 2d.	1164	68	1232	3047
Club Coupe	1189	69	1258	3037
Sedan, 4d.	1214	70	1284	3082
Special DeLuxe				
Coupe, 3p.	1209	69	1278	2982
Sedan, 2d.	1239	71	1310	3062
Club Coupe	1264	72	1336	3057
Sedan, 4d.	1289	74	1363	3107
Convertible Coupe	1565	89	1654	3282
Suburban	1669	94	1763	3402
PONTIAC				
Torpedo Six				
Business Coupe	1287	100	1387	.....
Sport Coupe	1336	102	1438	3300
Sedan, 2d.	1350	103	1453	3305
Sedan Coup	1380	104	1484	3305
Sedan, 4d.	1406	106	1512	3330
Conv. Sedan Coupe	1690	121	1811	3570
Conv. Sedan Coupe, DeLuxe	1730	123	1853	.....
Streamliner Six				
Sedan Coupe	1439	108	1547	3405
Sedan, 4d.	1487	111	1598	3460
Station Wagon, Std.	2092	143	2235	.....
Station Wagon, Del.	2166	146	2312	3725
Torpedo Eight				
Business Coupe	1332	102	1434	.....
Sport Coupe	1381	104	1485	3365
Sedan, 2d.	1395	105	1500	3375
Sedan Coup	1425	106	1531	3375
Sedan, 4d.	1451	108	1559	3415
Conv. Sedan Coupe	1735	123	1858	3645
Conv. Sedan Coupe, Del.	1775	125	1900	.....
Streamliner Eight				
Sedan Coupe	1484	111	1595	3460
Sedan, 4d.	1532	113	1645	3520
Station Wagon, Std.	2137	145	2282	.....
Station Wagon, DeLuxe	2211	148	2359	3795
STUDEBAKER—1948				
Champion DeLuxe				
Coupe, 3p.	1347	99	1446	2600
Sedan, 2d.	1412	102	1514	2685
Coupe, 5p.	1437	103	1540	2670
Sedan, 4d.	1442	104	1546	2735
Champ. Regal DeLuxe				
Coupe, 3p.	1417	102	1519	2620
Sedan, 2d.	1482	106	1588	2710
Coupe, 5p.	1507	107	1614	2690
Sedan, 4d.	1512	107	1619	2760
Convertible	1845	125	1970	2875
Commander-DeLuxe				
Coupe, 3p.	1632	119	1751	3140
Sedan, 2d.	1697	122	1819	3230
Coupe, 5p.	1722	123	1845	3210
Sedan, 4d.	1727	124	1851	3265
Comm. Regal DeLuxe				
Coupe, 3p.	1747	125	1872	3155
Sedan, 2d.	1812	128	1940	3245
Coupe, 5p.	1837	129	1966	3225
Sedan, 4d.	1842	130	1972	3280
Land Cruiser	2005	138	2143	3340
Convertible	2178	147	2325	3420
WILLYS				
Station Wagon	1495	.....	.....	.....

Right: The two-door Angila with a 90-inch wheelbase and 30 horsepower engine.

Lower right: The four-door Perfect sedan, which is four inches longer than the Anglia.

Lower left: The Thames Van shown here will be available in quarter-ton and half-ton panel models.

British FORD Comes to America

Henry Ford II "feels out" the light car market in America with 12,000 British Ford cars and small trucks

Specifications for Anglia and Prefect passenger automobiles

	ANGLIA	PREFECT
Wheelbase	90 in.	94 in.
Gross Weight	1700 lbs.	1840 lbs.
Overall Length	152¼ in.	155½ in.
Overall Width	57 in.	57 in.
Overall Height	63 in.	63½ in.
Ground Clearance	8⅞ in.	8⅝ in.
Tread	45 in.	45 in.
Tires	5.00 x 16	5.00 x 16
Fuel Capacity	8.4 gal.	8.4 gal.
Horsepower	30.1	30.1
Springs	transverse	transverse
Drive	Torque Tube	Torque Tube
Engine	4 cyl.—L Head	—4 in line
Bore	2.5 in.	2.5 in.
Stroke	3.64 in.	3.64 in.
Displacement	71.55 cu. in.	71.55 cu. in.

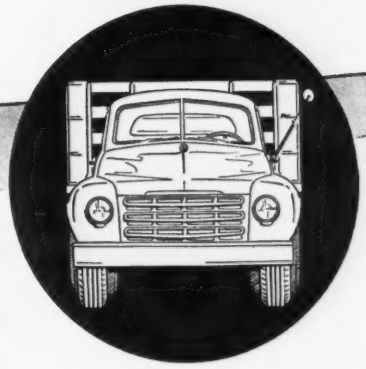
First shipments from England of Anglia and Prefect passenger automobiles and Thames Vans, equivalent to the American light panel truck, have now reached the American market. The Anglia is a four-passenger, two-door sedan, and the Prefect is a four-passenger, four-door model. The Thames Van comes in two different sizes which are equivalent to our domestic one-quarter ton and one-half ton light panel truck models. All of the passenger cars and vans are manufactured by Ford in Dagenham, England.

CONTINUED ON PAGE 110

Again it's Studebaker first by far!

AMERICA'S FIRST 1949 TRUCKS ARE HERE!

They're sensationally new in design and performance!



New 1949 Studebaker Trucks

AMERICA'S NEWEST AND FINEST

Ford '49 . . . . . CONTINUER FROM PAGE 37

mixture to flow to the rear cylinders. Fuel economy is said to be improved by 10 per cent, and the addition of the optional over-drive, installed at the factory, improves gas mileage by as much as 25 per cent, according to the manufacturer. Improvement of the distributor by the adoption of full vacuum spark advance control elimination of mechanical governor actuation, and use of a single breaker arm are also new features. The compression ratio is 6.9 to 1, and the crankshaft for the V-8 is heavier than before, with larger main bearings. Sludge traps are drilled for each rod bearing.

The new motor mounts are specially designed to minimize engine vibration and to prevent transmission of engine vibration to the chassis. The elements of the Hotchkiss drive also combine to prevent transfer of road noise and vibration into the chassis.

The cooling system has been improved with the introduction of the "equaflow" design in which water flows the full length of the block. Temperatures in normal hot spots have been decreased as much as 12 degrees, thus contributing to better performance under extreme operating conditions. The V-8 has water pumps of increased capacity.

The time-honored transverse spring and front axle has given way to independent suspension with "hydro-coil" springs. In this design the direct acting shock absorbers are mounted within the low frequency coil springs, thus simplifying the layout and improving ease of servicing. Favorable steering geometry was effected by the use of a parallel link layout. The pressed steel upper and lower arms are mounted to the front cross member, and threaded bushings are used in the linkage. The pivot point of the tie-rods is now on the same center-line

CONTINUED ON PAGE 74

BRUNNER SINCE 1906 **AIR helps you serve better**

Memo to Automotive Service Operators

AIR COMPRESSORS ARE MOST INTERESTING

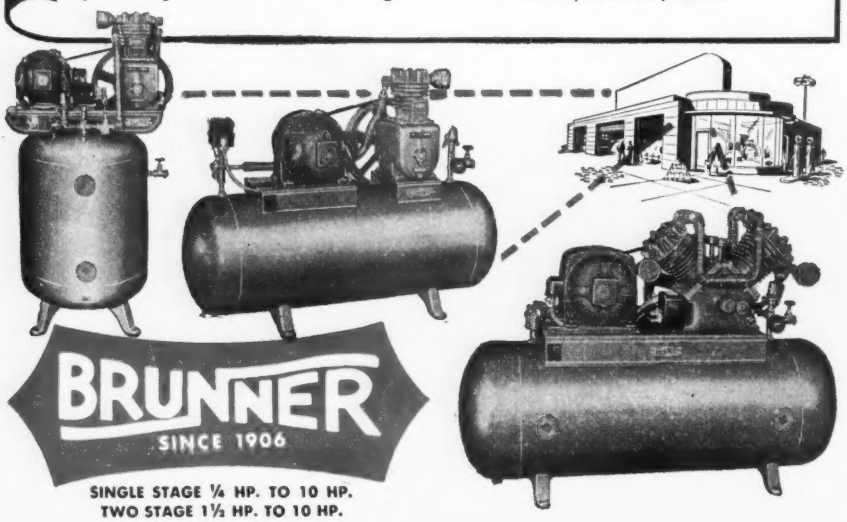
Guess we say air compressors are most interesting because they look so much alike but are so very different in service—there are so many angles to be considered and checked.

The important point is *dependable,* low cost air application to the many services that actually provide operating *income.* This starts at your telephone. Spend a little time with your experienced Brunner representative*. *Plan* air supply and uses. Start with compressor design, type, capacities—right on through to air on the job.

Don't select by guess! Use facts. Brunner air dollars do go farther —produce more.

*Write for his name—he can be very helpful.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.



BRUNNER SINCE 1906

SINGLE STAGE ¼ HP. TO 10 HP.
TWO STAGE 1½ HP. TO 10 HP.

"You can kiss me if you want to, but you'll have to use force!"

THERE'S MORE *PROFIT* IN THE COMPLETE KING LINE

The King Line includes Pistons, Pins, Motor Bearings, Valves, Cylinder Sleeves, Water Pumps and Parts, Front End Parts and Shackles . . . all in one catalog from one jobber. That's real service!

KING QUALITY

KING QUALITY PRODUCTS

"Building for the future on a 28 year record"

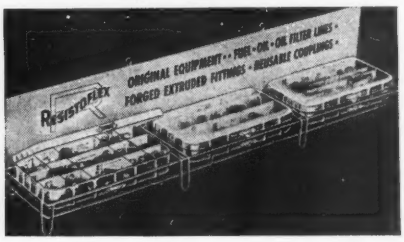
SAINT LOUIS 10, MISSOURI

PISTONS • PINS • VALVES • BEARINGS • WATER PUMP PARTS
BOLTS • BUSHINGS • SILENT-U SHACKLES • SLEEVES • WHEEL SUSPENSION PARTS

New Products . . . CONTINUED FROM PAGE 45

L-10 Resistoflex Display

The most popular assortments of brass fittings is now being marketed in plastic "See-All" boxes by the Resistoflex Corporation, Belleville, N. J. Known as the "See-All" Stand Rack Assortment No. 321, it includes a



metal rack that can be fastened to a wall, set on a ledge, or placed on a work bench. There is no charge for this rack, it is stated in the catalogue, the total cost of the assortment being the cost of the fittings only.

L-11 Welding Book Folder

The Air Reduction Sales Company has announced a folder which describes in detail their five available welding and cutting instruction books. According to the company these books will prove valuable informational and instructional sources for students, instructors, professional welders, and design engineers. The volumes are devoted to arc welding, and two to oxy-acetylene welding and cutting. The fifth book is "Manual of Design for Arc Welded Steel Structures."

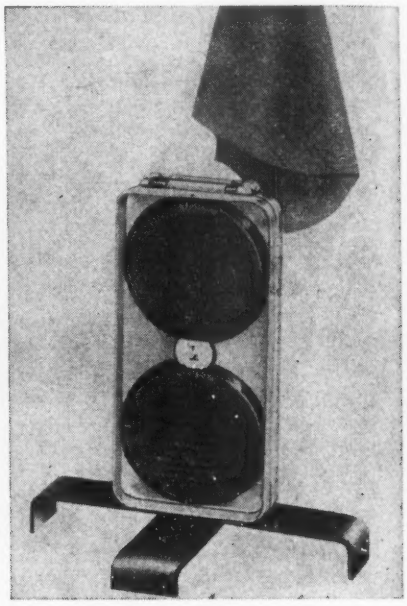
L-12 Touch Up Kit

The X-ACT Match color kit, according to the manufacturer, the Briggs Mfg. Co., Detroit, Mich., matches exactly the original colors applied to the cars at

the factory. The 30 bottles in the kit are mounted in three rows on a counter stand for merchandising by dealers and distributors. The brush for application of the paint is attached to the top of each bottle for easy use. The round bottles prevent the pigment from settling in the corners of the containers. Kits are available for Plymouth, Dodge, DeSoto, Chrysler, Packard and Ford body colors.

L-13 Grote Flameless Flare

A new flameless signal flare, said to be conforming to all photometric requirements of the Interstate Commerce Commission, has been introduced by the



Grote Mfg. Co., Bellevue, Ky. The 2¼ inch x 7 inch panels unfold and expose two reflector lenses made of permanently brilliant, red Plexiglass. The collapsible base affords a support on the road, and is said to be steady even in a 40-mile wind. A flag holder is built into the flare and flags are furnished as an extra at additional cost.

L-14 Coil Spring Silencers

William and Harvey Rowland, Inc., Philadelphia, Pa., now offer upper and lower coil spring silencers for replacement on Chrysler, DeSoto, Dodge, and Plymouth, as well as many other makes. The manufacturer states that neoprene stock is used in molding these parts and that they are exact factory duplicates.

MAIL THIS COUPON:

For further information on any of the products mentioned in Motor Age write the code number of the product in the space provided below. Don't forget your name and address.

Frank P. Tighe
MOTOR AGE
Chestnut & 56th Sts., Philadelphia 39, Pa.

Code Number of New Products.....

.....

Your Name.....**Your Title**.....

Your Company.....

Address.....
(STREET & NO.) (CITY) (ZONE) (STATE)

Signs of authority

● Each of us contributes to the authority that goes with the policeman's badge. And each of the 10,500,000 Auto-Lite users makes the display of the Auto-Lite sign important to you. Because more than half of America's car manufacturers specify Auto-Lite parts as original factory equipment, your identifying yourself with Auto-Lite makes you the logical choice of Auto-Lite's big ready-made market . . . stamps you as an authority on service and a reliable source of original factory parts. Write for complete details.

THE ELECTRIC AUTO-LITE COMPANY
Parts and Service Division
Sarnia, Ontario *Toledo 1, Ohio*

Tune in the Dick Haymes Show for Auto-Lite Thursdays, 9:00 P.M., E.T. on CBS.

AUTO-LITE

Money cannot buy better Automotive Electrical Equipment

as the wheels.

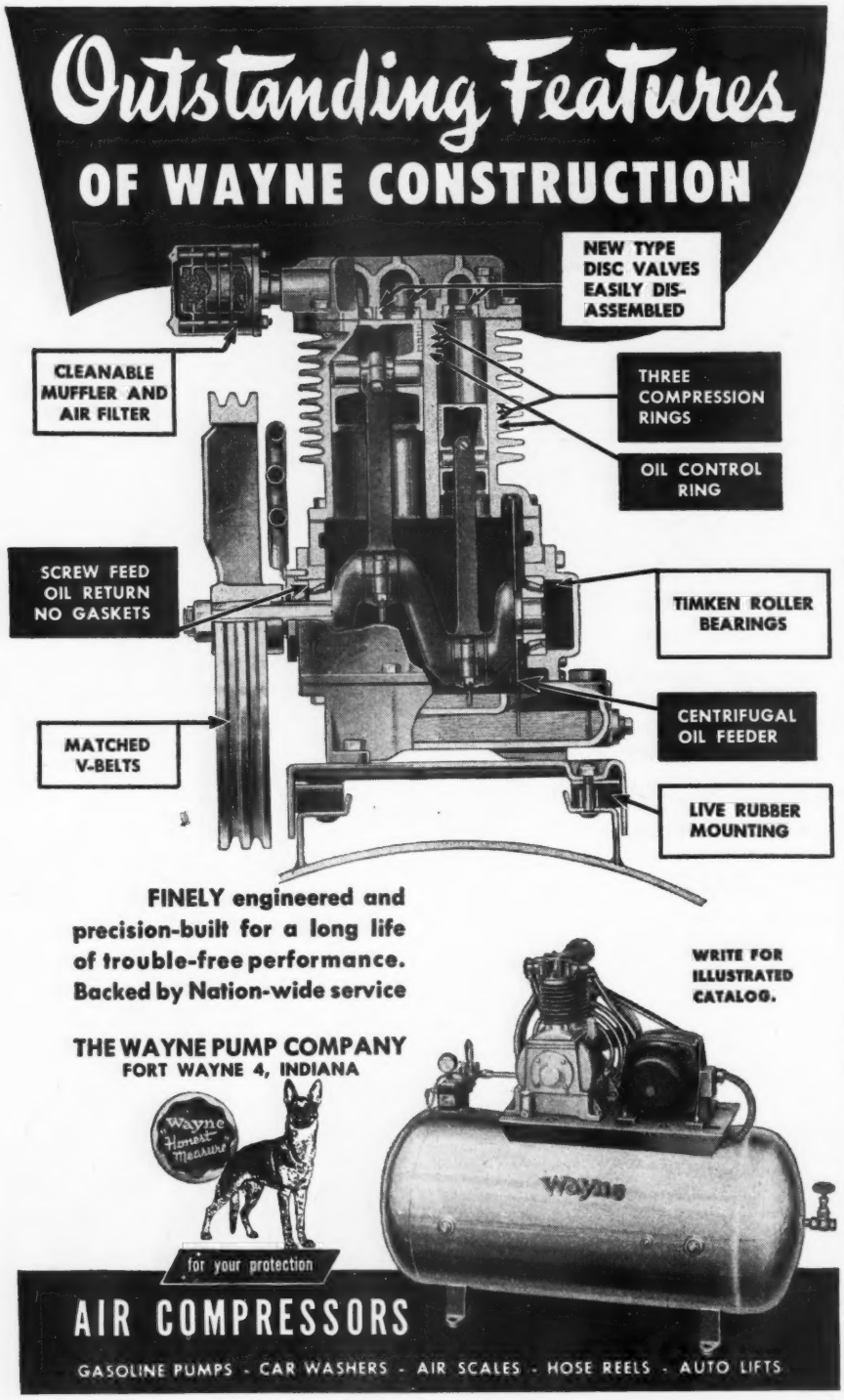
Adoption of Hotchkiss drive comes hand in hand with the introduction of a semi-floating hypoid rear axle, having a two-pinion differential and a reduction of 3.73 to 1 as standard. Other ratios are available for special operating conditions; for example, a ratio of 4.0 to 1 is used when overdrive is specified, the same ratio being supplied for mountain drive. The axle shaft has a flanged end which eliminates the conventional rear hub, the wheel being attached directly to the flange. A long semi-centrifugal clutch with Torbend disc fitted with a spring type vibration damper is standard equipment.

The brake system uses drums of smaller diameter, but with increased lining area, and greater capacity at the front to accommodate the change in weight distribution. Ford now uses Bendix hydraulic duo-servo brakes of floating anchor type, with molded linings. They have 10 x 2¼ inch brakes in the front, and 10 x 1¾ inch in the rear. The front wheel cylinder is 1⅛ inch, while the rear is ⅞ inch. Lining area of the 1949 brake system is 177 sq. inches as compared with 162 sq. inches on the 1948 model.

There are several new safety factors besides the increased braking capacity and improved steering. The box-type frame is of all-welded construction, and although lighter, it has 59 per cent more rigidity when combined with the body. Increased window area has been provided in order to improve visibility. All doors hinge at the front, and inside handles push up instead of down, to preclude accidental opening of the doors.

Body width has been decreased to a maximum width of 71.7 inches, yet the front seat is six inches wider, and the rear seat is nearly eight inches wider. A 56 inch tread is used front and rear, with the 114 inch wheel base the same as in previous models.

CONTINUED ON PAGE 76

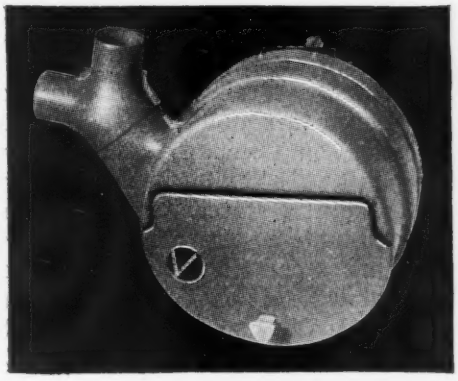


"Sometimes they stick, —then let go!"

ANNOUNCING

THE NEW HARRISON

HEATERS and DEFROSTERS



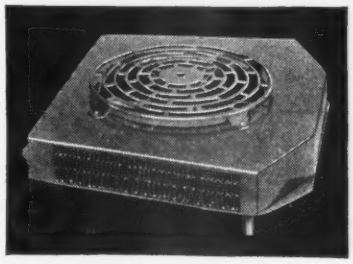
HIGH EFFICIENCY!
LOW PRICES!
MORE PROFIT!
A UNIT FOR EVERY NEED!
FITS ALL POPULAR CARS!
EASY TO INSTALL!

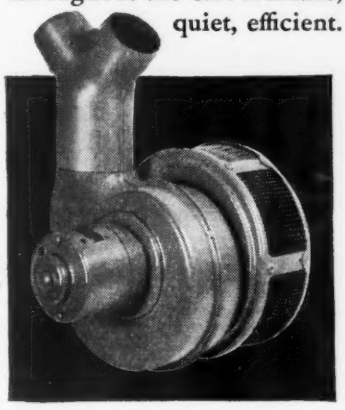
NEW COMBINATION SUPER DASH HEATER-DEFROSTER

It's hot three ways—as a heater, as a defroster, as a sure-fire money-maker for dealers. Has an all-copper tube and center type core, the largest capacity motor we have ever put in a heater, an 8-inch propeller fan, and large (1¾-inch) defroster take-off tubes.

UNDERSEAT HEATER

Easiest of all underseat heaters to install, and will fit into most of the new cars. Distributes heat evenly throughout the car. Durable, quiet, efficient.





DEFROSTER

For use with an underseat heater; easily installed on the dash. Circular heater core, double outlet, powerful motor. Heat output is nearly as great as that of a small car heater.

Harrison presents a new and complete line of heaters and defrosters engineered to cover a wide range of car and truck applications. Simplified design provides for easy installation in practically all cars built since 1940 —and many earlier models as well.

Here, truly, is a hot line—priced to move fast and to be a big money-maker for the dealer. And it will be strongly supported with merchandising and sales help to boost public demand and dealer profits.

HARRISON

HARRISON RADIATOR DIVISION

GENERAL MOTORS CORPORATION, LOCKPORT, NEW YORK

UNITED SERVICE MOTORS

HARRISON HEATERS
A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

HELP AMERICA PRODUCE FOR PEACE
Turn in SCRAP Iron and Steel

Ford '49 . . . . . CONTINUED FROM PAGE 74

The 1949 models are being offered in two lines—Ford and Ford Custom, body styles in both including the four-door sedan, two-door sedan, and club coupe. Convertible and station wagon models are available only in the Custom line, while the three-passenger coupe is found only in the Ford line.

The station wagon is entirely new in design, with the elimination of the rear doors and enlargement of the front doors. This construction is designed to eliminate squeaks and rattles, and greater strength is achieved by the use of an all-steel body and a special X-type frame. The station wagon seats eight and permits easy loading of baggage without opening the end-gate at the rear. Two rear seats may be removed to permit carrying larger loads. In addition to the end-gate, there is an easily operated lift-door at the rear.

Among the optional equipment available are super-balloon tires on 15 inch wheels, turn signals, and a new type heating system. With automatic temperature control this system can be used as a fresh air ventilator, a fresh air heater, or a recirculating heater. Fresh air is scooped from large intakes just behind the grille.

L-15 Welding Torch

Christorch, a new welding and cutting torch has been introduced this month by the Hamilton Tool Company, of Hamilton, Ohio. Its flexible head, the manufacturer states, can be revolved through an arc of 180 degrees, thus increasing its field of usefulness. It is designed to cut metal of thicknesses from 1/32 in. to 4 in., and circles from 3/8 in. to 30 in. in diameter, with an accuracy to within 1/64 in. It is also said to cut countersunk holes and bevel one or both sides of a straight cut in a single action. It is stated further that it executes clean and accurate grooving operations, and cuts the heads from rivets and bolts without blemish to the surface of the work area. In addition to the flexible head, the torch also features a side-opening tip locknut.

This sign

and this sign

plus this plaque

will help you to better business and bigger profits in a great nation-wide public relations program for reputable Brake Service Dealers.

Ask your J-M distributor for complete details or write JOHNS MANVILLE JM PRODUCTS

Johns-Manville, Box 290, New York 16, N. Y.

WHY

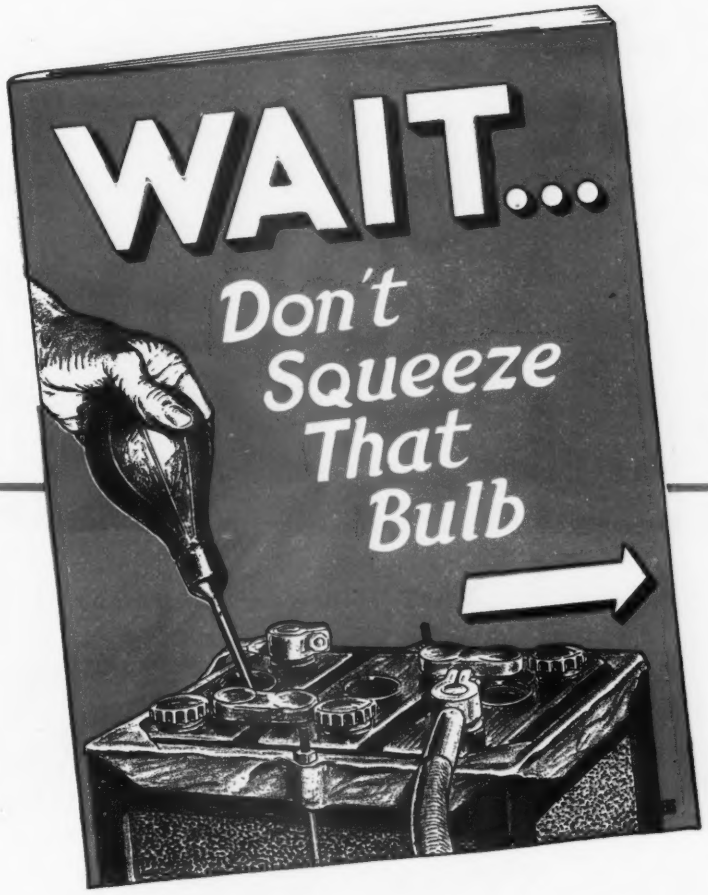
Exide Dealers sell more Batteries . . . make more Profits

As the manufacturer of Exide Batteries, we believe that our responsibility to the Exide Dealer extends beyond the building of a quality battery year in and year out. It extends beyond helping him to sell by consistently keeping the Exide name before the motoring public in our national advertising.

We feel that it is our responsibility to assist the Exide Dealer in his battery business—to provide him with the ways and means of fulfilling his responsibility to car owners, so that he will be sure to obtain the full measure of profits he earns and deserves.

We have put this responsibility into action by using our accumulated selling experience, knowledge and "know-how" in organizing a single, practical, money-making battery service routine. This service routine, the product of many years' experience is laid down in the manual, "Wait—Don't Squeeze That Bulb."

Exide Authorized Dealers are receiving this Manual by mail. If you are not an Exide Dealer, the local Exide Wholesaler will tell you how to obtain a copy.



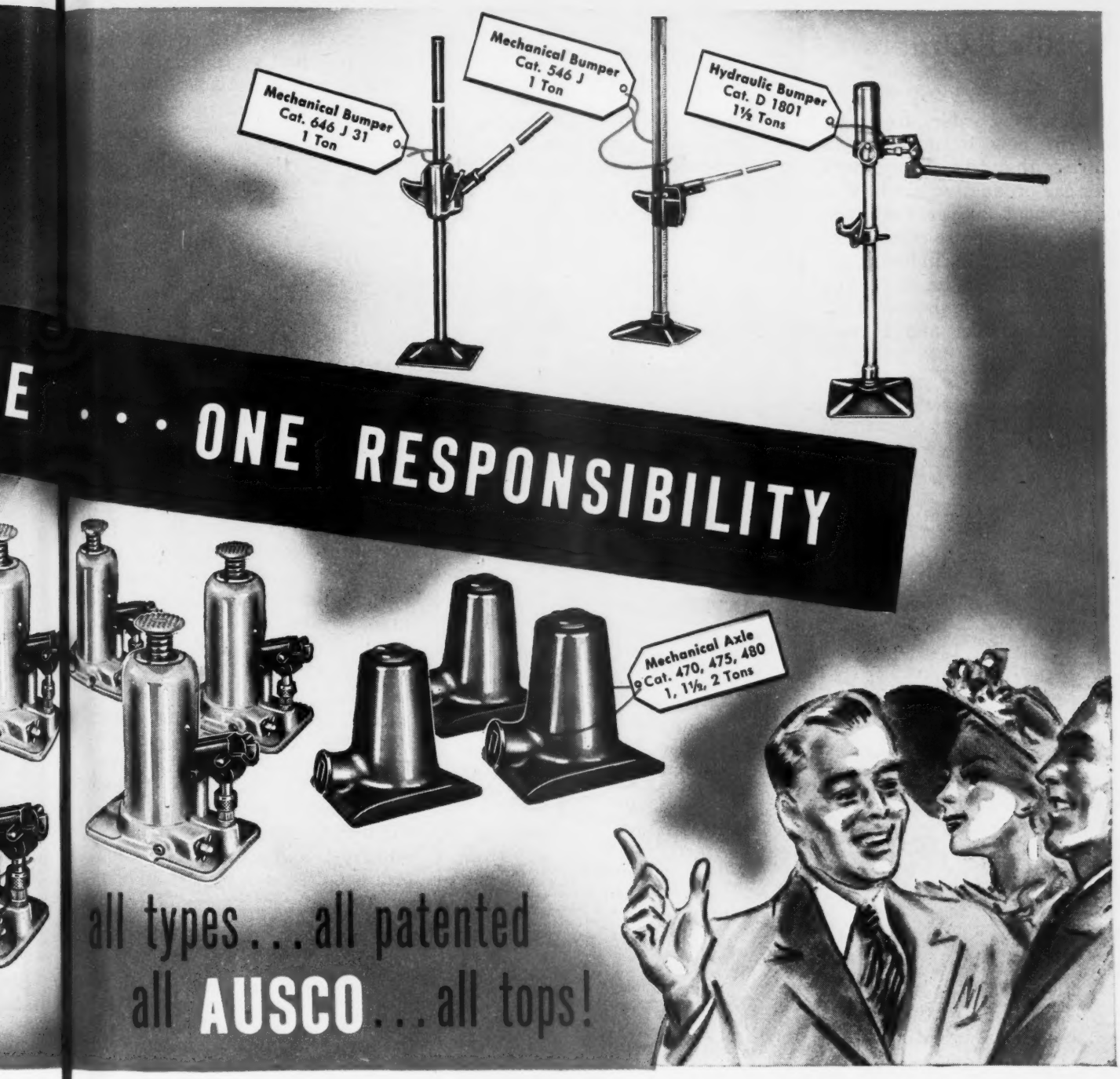
MORE THAN EVER BEFORE, IT'S GOOD TO BE AN EXIDE DEALER

•

1888—Dependable Batteries for 60 years—1948

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

ONE SOURCE
Hydraulic Axle
Cat. D 1501, 1511,
1521, 1531, 1541
1½ to 12 Tons
G-2797
Hydraulic Curb
Cat. D 1901
1½ Tons
Hydraulic Floor
Cat. D 1911—2 Tons
Cat. D 1931—4 Tons



When you deal with Ausco you are in business with a firm that has been in the jack business for nearly 30 years. The record shows that Ausco maintains prestige by deserving it—by staying alert and aggressive, by manufacturing and dealing squarely, by doing, and daring, and serving both trade and public.

Through this one source you can get everything in jacks—that means not only every TYPE of jack but right price, sound quality, happy user-customer-factory relations . . . all *plus* values without extra cost . . . AUTO SPECIALTIES MFG. CO., St. Joseph, Benton Harbor, Hartford, Mich.—Windsor, Ontario, Canada.

AUSCO Jacks

Plants located in St. Joseph, Benton Harbor and Hartford, Michigan; Windsor, Ontario, Canada

Unfilled Orders . . . . . CONTINUED FROM PAGE 43

accumulated orders, to say nothing of new business acquired during that time, since passenger car production has been running about 30 per cent trucks. Also, since these are average figures for the industry as a whole, it would be much longer before some companies, such as Ford, Chevrolet and Plymouth could be even with the board. But an even more important factor, is that despite the more than seven million passenger cars which have been built since the end of the war, the backlog of orders is larger now than it was a year ago. The upsurge in orders has been particularly sharp in recent weeks. The return of warm weather undoubtedly has had its normal affect on new orders. Also, rumors of impending war have led to reports that automobile companies would be converting to arms production and many persons rushed to order a new car. The rearmament program also has led to some fears that automobile production may be curtailed. The coal strike and threats of impending strikes against automobile manufacturers also have had their effect.

Against the pressure of constantly increasing backlogs, automobile builders have actually been losing ground in the production race. Since the first of this year, Chevrolet, for example, has experienced an increase of 40 per cent in its unfilled orders, indicating a reserve of 1.5 million on the basis of figures released late last year. Oldsmobile's backlog jumped from 386,000 to 431 between Jan. 1 and May 1 and at that time was 60 per cent higher than a year previous. Pontiac built 72,000 cars between the first of the year and April 15, but in that period its unfilled orders climbed from 511,000 to 567,000. Cadillac in late April had a total of 120,000 orders on hand, a rise of 30,000, or 25 per cent, since Jan. 1. Buick did not release any official figures, but it is understood that unfilled orders stand in the neighborhood of 550,000.

Ford put its orders through a drastic wringing out process to

CONTINUED ON PAGE 82

Acidproof glass-cloth-covered collector tube.

Glass cloth trap will not deteriorate when attacked by engine oil acids,—an exclusive AC advantage.

EXCLUSIVE!

AC's Glass Cloth Collector Tube Trap prevents pollution of the oil stream

Every oil filter prospect will want the exclusive protection afforded by AC's Glass Cloth Collector Tube Trap. It is not harmed by acids in engine oil—it can't rot and thus allow pollution of the oil—and finally, it gives *double filtration.* It's the greatest of 10 powerful AC sales features.

Big National Advertising Campaign Already Going On

This campaign will make money for you. Ask your AC wholesaler about it. And don't forget—there's a "5-Star Quality" Oil Filter for nearly every make of engine—and a better Replacement Element for nearly every make of oil filter.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

Unfilled Orders . . . . . CONTINUED FROM PAGE 80

remove duplications, but still came up with nearly 1.6 million as of the middle of April. By now, with the introduction of new Lincoln and Mercury models, the backlog probably has increased, and when the new Ford is announced in June undoubtedly will soar much higher.

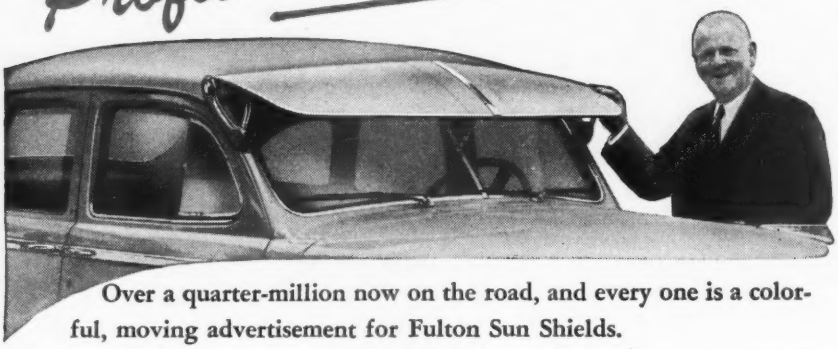
Studebaker reports that it has enough firm passenger car orders on hand to take a year and a half of production, with light truck orders a year behind. Nash deliveries now are from nine months to a year behind, but when new models are announced later this year, the backlog is expected to increase to the point that it will require from 18 months to two years to catch up. Packard says it can not possibly make enough cars this year to fill its booked orders, and that in many cases dealers are not taking new orders. Hudson has not announced any numerical count or other type of estimate on the size of its backlog, but states that the pressure is greater than ever for its new models. Kaiser-Frazer, which a few months ago was building faster than dealers were selling them, reports now that the demand is such that dealers are on a strict allocation basis. Production has been stepped up to a six-day, 53-hour week basis with one shift, although output is not as high as it was.

As a result of the boom in new orders, some automobile sales managers have revised their opinions about how long the seller's market may last. L. W. Ward, Pontiac sales chief, says it may take five years before the constantly growing demand for cars is met. D. E. Ralston, general sales manager for Oldsmobile, says there is no indication that a return of the buyers' market is in sight for this year or next. Others in the industry have various other opinions about how long the market will stay hot, but in all cases they are optimistic. Little is heard anymore about the market fading this year. On the basis of visible

CONTINUED ON PAGE 84

FULTON SUN SHIELD

Choice of the motorist . . . .
Profit opportunity for YOU



Over a quarter-million now on the road, and every one is a colorful, moving advertisement for Fulton Sun Shields.

Dealer profits 3 ways with Fulton Sun Shields: markup on original sale, charge for painting, charge for installation.

Fulton Sun Shield is backed by a consistent program of national advertising — Saturday Evening Post and Country Gentleman. Don't pass up this unusual profit opportunity. *Order now—sell Fulton Sun Shields.*

Fair Traded at $24.95 plus painting and installation (in all states having Fair Trade Laws).

FULTON MIRROR GLARE-SHIELD

LIST PRICE 79¢

Eliminates rear-view mirror glare at night.

Flips up for daytime, and down over mirror for driving at night. Made of tough, light-filtering plastic. Easily installed without tools, securely held by spring. Makes night driving safe, easy on the eyes.

FULTON TRAFFIC LIGHT FINDER

LIST PRICE $1.00

Bends overhead light rays into driver's vision. Clear plastic prism, mounts on inside of windshield with rubber vacuum cup.

THE FULTON COMPANY
Designers and Manufacturers of Automotive Equipment Since 1917
1912 S. 82ND STREET • MILWAUKEE 14, WISCONSIN

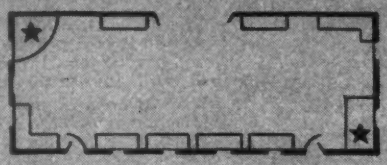
"I didn't make any wise-cracks about your needing a hair-cut. All I said was it would look nicer in curlers."

SPOT these $38 BENCH GRINDERS Around Your Shop

SAVE STEPS— SAVE TIME!

AT THIS LOW PRICE
YOU CAN USE SEVERAL BLACK & DECKER 6" STANDARD
BENCH GRINDERS

KEEP THEM HANDY



for Your Mechanics!

MANY PRACTICAL FEATURES!

- Constant speed Black & Decker 1/4 H.P. motor gives ample power for "run-of-shop" jobs—yet is economical to run.
- Full-size bearings on rotor and wheel spindles, covered by protective sleeves.
- Tool rests locked in base grooves with winged nuts for easy adjustment.
- Base equipped with four rubber feet for benchwork use, or units may be quickly bolted to new streamlined pedestals for spotting anywhere in the shop.
- Wheel guards are cast integral with the motor housings. One medium 6" Grinding Wheel and one 6" Wire Wheel Brush are included as standard equipment.

SPEED UP

Grinding, Buffing, Wire Brushing!

They're economical to buy—economical to operate—sure to increase the efficiency of your shop! That's why it pays to install several Black & Decker 6" Standard Bench Grinders at strategic points in your shop . . . within easy reach of your mechanics! With grinding wheels, these sturdy, well-balanced Bench Grinders keep tools sharp and clean, do many types of grinding and metal removing. With B & D "Whirlwind" Wire Wheel Brushes, they clean valves, spark plugs and other gummy, dirty parts. Ask your nearby Black & Decker Distributor for a demonstration.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker

PORTABLE ELECTRIC TOOLS

Write for free catalog to: The Black & Decker Mfg. Co., 627 Pennsylvania Ave., Towson 4, Maryland.

Unfilled Orders . . . . . CONTINUED FROM PAGE 82

evidence of mounting orders, they appear to be solid.

There is no way, of course, to determine what percentage of backlog orders represents actual replacement needs as compared with the number buying a new car even though their present vehicle may still be eminently satisfactory from a service standpoint. There is considerable evidence that many owners of 1945, '46, and even '47 cars are back in the market for new models. However, approaching the problem of demand on the basis of actual replacement needs turns up heavy supporting evidence that millions of cars now on the roads would be replaced if new cars were available. In the April issue of *Survey of Current Business,* publication of the Commerce Department, government economists point out that as a result of the continued abnormally low scrappage rate, the number of overage cars which owners normally would replace increased to between five and six million by the end of 1947. According to R. L. Polk & Co., the number of cars in use 10 years old or more increased from 5 million in 1941 to 11½ million in mid-1947. Cars 12 years old or more increased from 2½ million during the same period.

The Commerce Dept. says further that while scrappage rates will be higher when cars again are in good supply, evidence suggests that the prewar trend toward higher scrappage age of cars will continue, and predicts on the basis of previous studies that the average age will be 12 years, or 20 per cent higher than the 1939 figure. On the basis of gasoline consumption, it is estimated that the cars would have been driven about 100,000 miles before being scrapped. On the basis of a 12-year scrappage age, 5½ million cars were in need of replacement at the end of last year, and if the 1939 practice of scrapping at about 10 years were followed, the total

CONTINUED ON PAGE 89

Announcing the New Airco 700 Welding Torch

The Airco 700 is easily converted to handle general shop cutting work by the addition of a cutting attachment.

. . . DESIGNED TO HANDLE 90% OF YOUR WELDING AND BRAZING JOBS

The NEW Airco 700 is designed especially for shops with a wide variety of welding and brazing jobs. It does 90% of this kind of work. Its features are:

Wide Operating Range . . . With its wide selection of tips, the "700" can be used on almost any welding job from thin sheet metal up to 2" plate, and with a multi-flame tip, it's unbeatable for silver and aluminum brazing.

Better Flame Control . . . Tip assemblies from Nos. 00 thru 10 are available. Each welding tip is assembled with a mixer drilled for that particular tip size. This means finer flame control . . . no sputtering—better welds result.

Low Maintenance Costs . . . Its long-wearing monel metal head means fewer replacements, and lower maintenance costs because rarely is reseating required.

Perfect Balance . . . Lightweight, and equipped with 3/16" I.D. hose, the "700" eliminates heavy hose drag, and reduces operator fatigue.

For heavier jobs, a series 800 Torch is available. It is like the "700" in both apperance and operating characteristics.

If you would like to have either the "700" or "800" demonstrated right in your own shop . . . or if you desire more information about these torches, address Dept. MG-8790, Air Reduction, 60 East 42nd Street, New York 17, N. Y. In Texas: Magnolia Airco Gas Products Company, Houston 1, Texas. On West Coast: Air Reduction Pacific Company, San Francisco 4, Calif.

AIRCO **AIR REDUCTION**
Offices in All Principal Cities

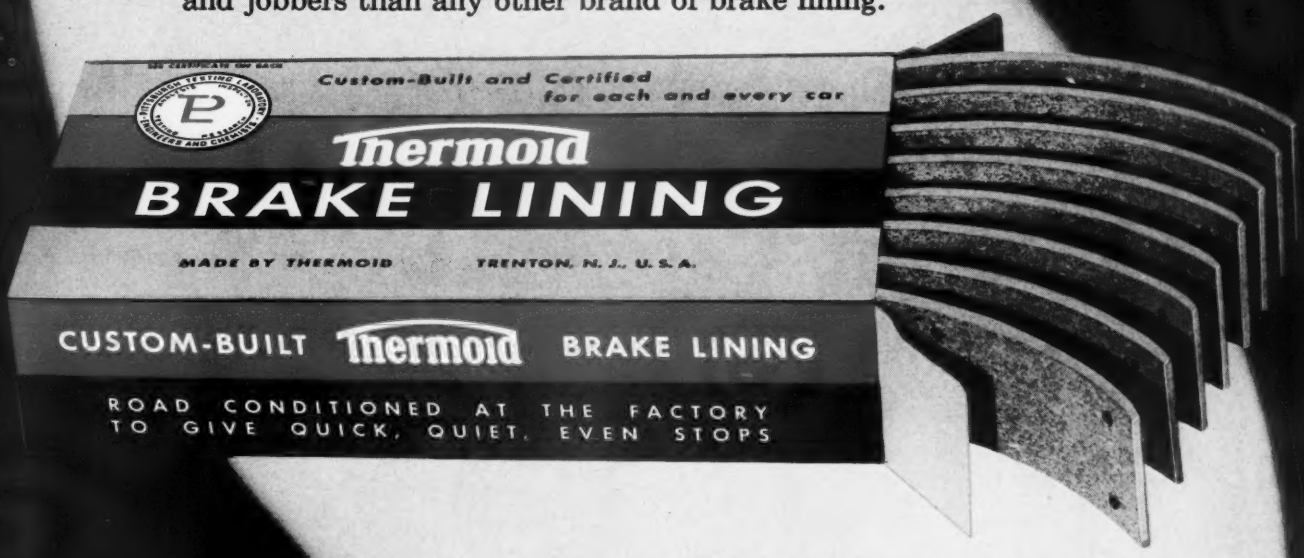
Headquarters for Oxygen, Acetylene and Other Gases . . . Carbide . . . Welding and Cutting Machines, Apparatus and Supplies . . . Arc Welders, Electrodes and Accessories

"Of course, even if I didn't marry you, diamonds are always a good investment."

Thermoid

BRAKE LINING

Brakes relined with Thermoid give new car performance, more stops per set and no comebacks. Sold by more of the larger and better distributors and jobbers than any other brand of brake lining.



Thermoid Custom-built brake lining sets plus "Precision Processing" means perfect brake performance.

Thermoid—the lining that gives you the brakes

Thermoid

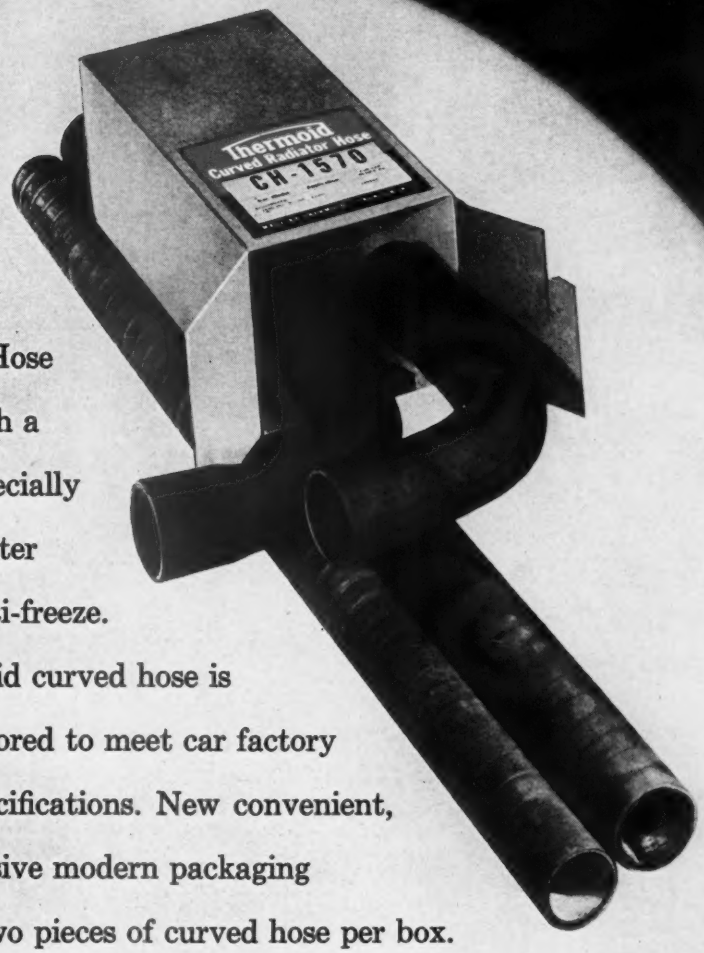
FAN BELTS

An exclusive pre-stretching process makes Thermoid Fan Belts "a horse of a different color." Instead of stretch, slip, wear and fail —the usual life story of ordinary fan belts—Thermoid Pre-stretched Fan Belts stay the same size.

Pre-stretching makes them better

Thermoid

RADIATOR HOSE



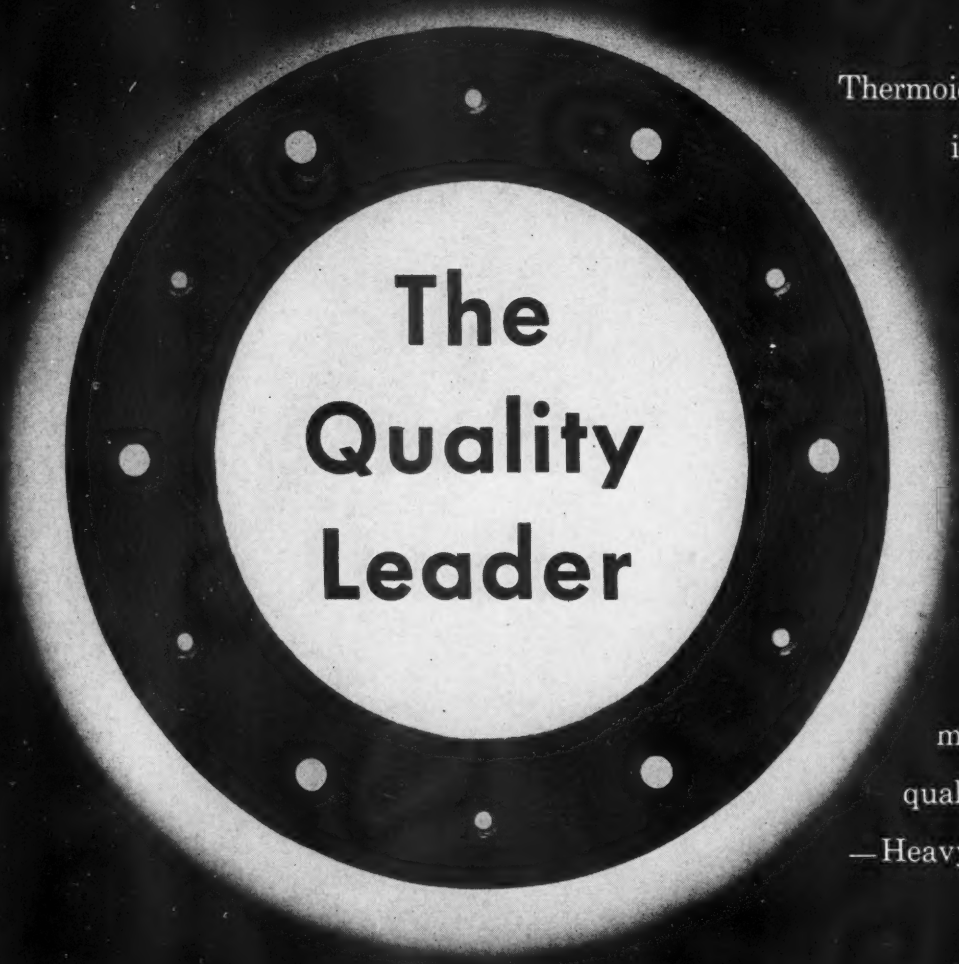
All Thermoid Radiator Hose is manufactured with a tube compounded especially to resist hot water or anti-freeze.

• Thermoid curved hose is custom-tailored to meet car factory specifications. New convenient, exclusive modern packaging —two pieces of curved hose per box.

The choice of leading car manufacturers

Thermoid

CLUTCH FACINGS



Thermoid Clutch Facings are made in several types for various applications and services. The new exclusive SUPER-SMOOTH facing is in top demand because of its superior, modern construction. Proved performance has made it the quality choice of the car and clutch manufacturers. Three other quality types complete the line —Heavy Duty—Molded—Woven.

The Thermoid Line

Brake Lining • Thermo-Blocks • Clutch Facings • Fan Belts • Radiator Hose (Curved and Straight) • Car Mats • Miscellaneous Hose • Complete Brake Service Departments • Thermoid Precision Process Equipment • Universal Cylinder Hones

Thermoid Company, Trenton, New Jersey

Unfilled Orders

CONTINUED FROM PAGE 84

needing replacement would have been about 17 million at last year-end. Another interesting point is that of approximately 30 million passenger cars registered at the end of 1947, at least 23½ million were prewar cars, the youngest of which were six years old. Consequently, the market on a replacement basis alone should assure high production for several years, to say nothing about supplying the large number of persons who are buying a new car for the first time.

In spite of the phenomenal demand for new automobiles, the industry has not been able to hit a production stride that will make much of a dent in the backlog of orders. Material shortages and strike within the industry and outside it have continually upset schedules since production started after the war. Last year was a fairly good one, production wise, but not nearly good enough to meet the demand. In the early postwar months, optimistic estimates of 6-million-car years often were heard, but no one talks about that anymore. At the outset of 1948, it was thought that the industry could build from 10 to 15 per cent more units this year than it did last year, for a total of about 5.5 million cars and trucks, of which about 4.5 million would

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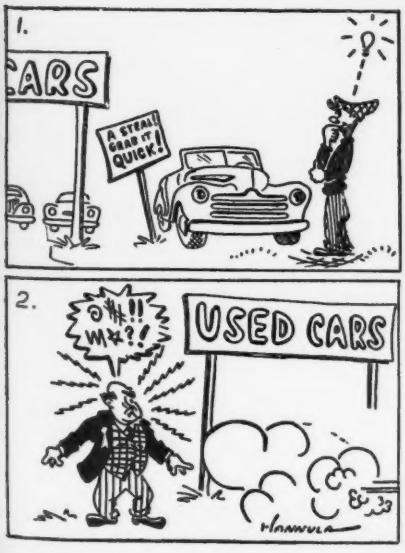
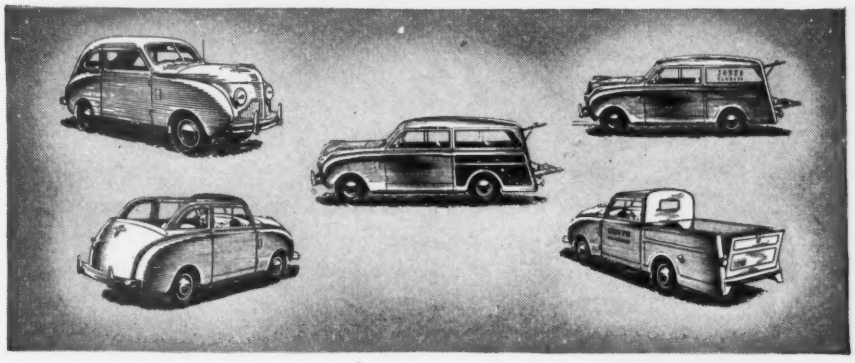


His Crosley Car sales earned a second, exclusive dealership!

When Wade H. Thornton wrote Powel Crosley, Jr., in 1946, he had been operating his own dealership for another make of car for 10 years. With a total of 20 years of experience in the automobile business, he quickly recognized the sales and profit potentials of the Crosley Car. He received his Crosley franchise in August, 1946. In about a year, his volume on Crosley Car sales and service justified an exclusive Crosley dealership. Meanwhile, he maintained his older dealership and today is one of Nashville's leaders.

WADE H. THORNTON

THORNTON'S UNIVERSITY MOTORS HANDLES CROSLEY CARS EXCLUSIVELY



"Still room for more Crosley money-makers"

"There are now over 40,000 Crosley Cars on the road. There are going to be *thousands more.* Will you be one of the Crosley dealers who will make big money on those sales? Look around. If there is no Crosley dealer in your community, *write me personally.*"

Powel Crosley Jr.

President, Crosley Motors, Inc.

CROSLEY
a FINE car

CROSLEY MOTORS, INC., 1110-N ALFRED STREET, CINCINNATI 14, OHIO

Unfilled Orders . . . . . CONTINUED FROM PAGE 89

be passenger cars. However, shortages of fuel gas during the winter, the coal strike, and the continued tight steel supply have led to forced setbacks, and it now appears that the industry will do well to build as many units this year as it did in 1947. Not only did the coal strike cause a loss of an estimated 215,000 cars, but the prospects for more steel that had been expected in the late months of this year are now more uncertain because of possible requirements of the Marshall plan and the re-armament program which probably will start to feed on the material supply late this year. Just how much affect these two programs will have on the automobile industry is not yet known, but even a small diversion will be felt while the industry cannot get as much steel as it needs.

L-16 Shearite Cutter

A triple-purpose hand tool incorporating a cutter for popular sizes of machine screws and which also cuts and strips electrical wire has been announced by the manufacturer, Air-craft-Marine Products, Inc., Harrisburg, Pa. Known as the "Shearite," this pocket-size tool is said to cut off, without damage to threads, any of the four sizes of machine screws most used in electrical work. The screw to be cut is threaded into a tapped hole to the desired length and the handles closed. The end of screw is sheared off clean, leaving the screw free from burrs or damaged threads, ready for use without filing. The manufacturer also claims its merit as an effective wire-stripper, wire-cutter, and wire-size gage. The "Shearite" is made of hardened alloy steel, and is fitted with shock-proof plastic handles.

For further information use Coupon on Page 72

UP TO 45% MORE PROFIT ON ARMATURE WORK

WITH AN Atlas LATHE

"We used to have to be satisfied with a profit margin of only 5% or 10%," reports a large mid-western garage, "on armature work sent outside. Now, by handling this work on our Atlas 10" lathe, we make a full markup on cost."

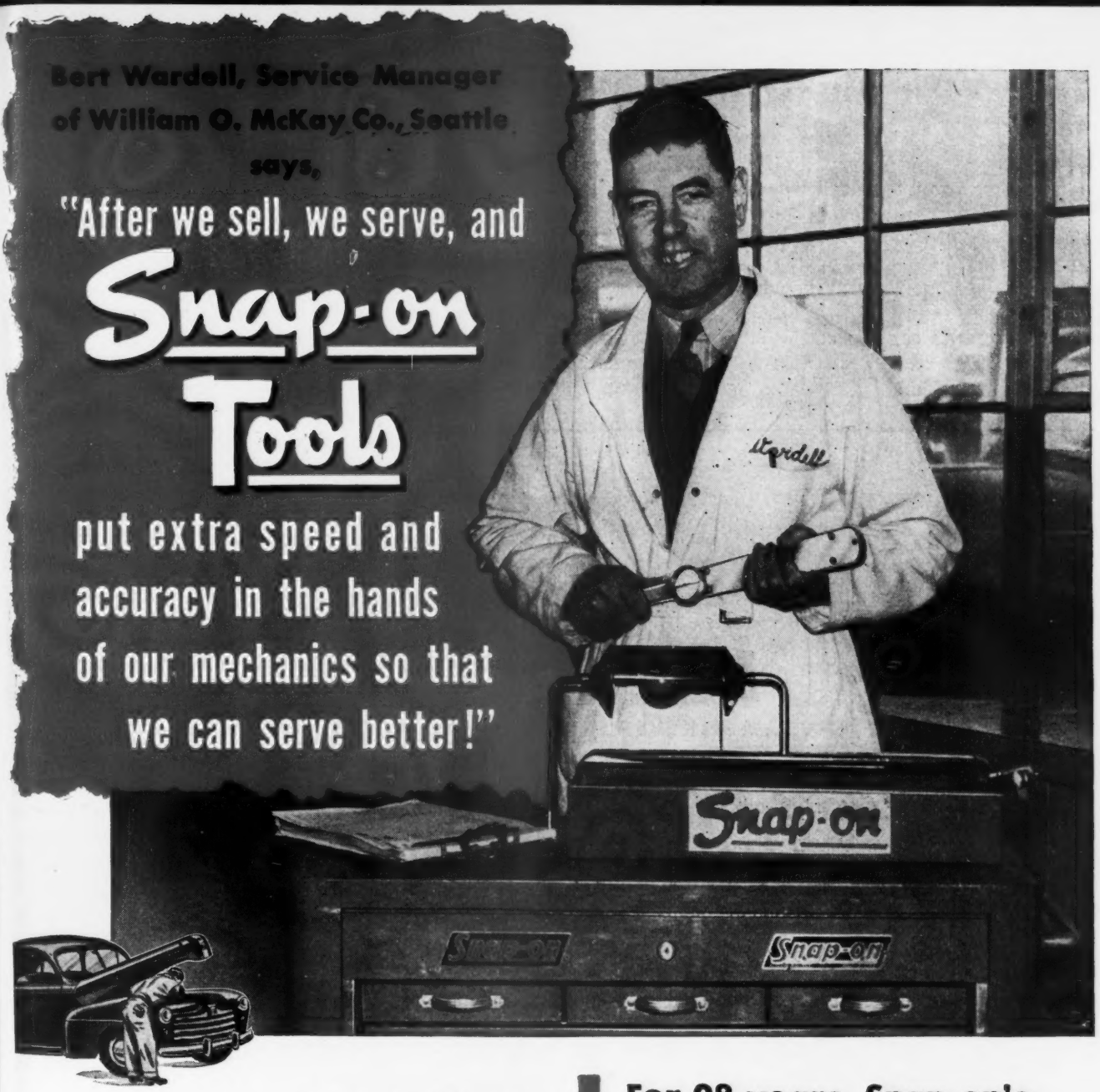
That garage also uses its Atlas to check ring gear carriers for trueness, axle shafts for straightness, and the service manager finds the Atlas "most handy for keeping other servicing equipment in repair. If a bolt in a jack goes bad, or some other piece of equipment needs a new part in a hurry, a mechanic can turn it out on the Atlas. There's no waiting for parts orders to come through while the equipment stands idle."

You, too, can speed up your repair work and make more profit by having an Atlas for the 44 different automotive jobs this versatile tool can handle. Ask your jobber for full details. Send for new catalog.

SEND FOR YOUR COPY TODAY

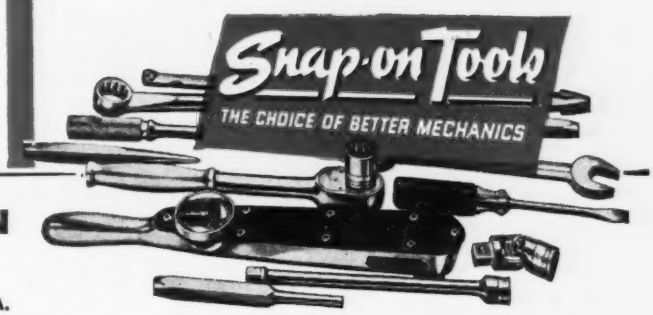
ATLAS PRESS CO. 688 N. PITCHER ST. KALAMAZOO 13D, MICH.

"Better humor him. Show him your license.



Expert mechanics themselves, service managers throughout the country know from experience that Snap-on tools encourage speed and accuracy and contribute to better workmanship. That's why he welcomes the call of the Snap-on field man . . . tool kits are kept up to par . . . mechanics enjoy the advantage of having the *right* tool for every job . . . and wasteful "tool-chasing time" is eliminated. Little wonder that service managers from coast-to-coast are just about unanimous in their liking of Snap-on tools and in their endorsement of Snap-on direct-to-user tool service. This service is available everywhere, through 40 direct factory branches.

For 28 years, Snap-on's Direct-to-user Tool Service has proved to be "The Time-Saving Way to Buy Time-Saving Tools"



SNAP-ON TOOLS CORPORATION

8036-F 28TH AVE., KENOSHA, WISCONSIN

International Division: Kenosha, Wisconsin, U. S. A.

Pop O'Neil . . . . . CONTINUED FROM PAGE 47

"Oh sure," said Larry. "He can go shootin' in the dark when he feels like it. But everybody else has got to work accordin' to the book."

Larry was back at his bench when Pop caught up with him. Tommy kept an ear cocked.

"That Buick ready?" he heard Pop ask.

"I'm afraid that peddler's gonna have to wait a while for that rock crusher of his," said Larry.

Tommy saw Pop's lips tighten. "If that car ain't ready by five," said Pop, "there's gonna be a nice openin' around here for a good mechanic."

"We can't install main bearings in a coupla hours."

"Who said it was bearing trouble?"

Larry thrust out his jaw. "I did."

Pop rubbed an ear. "Made an oil-pressure test?" he asked.

"I don't have to. I heard enough bearing knocks in my life to tell one a mile off."

"Somethin' could be a mile off right now," said Pop, "and it **could** be you. Ever hear the way rods knock when they're outa line?"

Larry became scornful. "Sure," he said. "I cut my eyeteeth on con rods."

"Personally," said Pop, "I think a teethin' ring would taste better. But you're still sure the trouble with this Buick ain't rods?"

Larry pinched his lower lip thoughtfully. "Could be," he said, "but that ain't no do-it-while-you-wait job neither."

Pop hauled out his big pocket watch and held it at arm's length to read it more easily. "Well find out what it is," he said. "We don't go tearin' down engines around this shop till we know we have to. If you think the mains are loose, run an oil-pressure test on 'em."

"Suppose that ain't the trouble," said Larry. "Do you want to check it yourself?"

Pop put away his watch.

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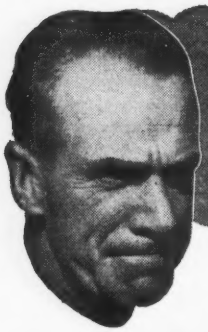
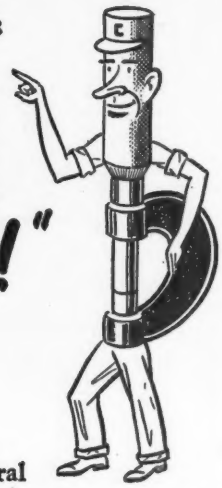


NOT HAVING THE RIGHT SIZE MICROMETER COST ME FOUR HOURS ON THAT JOB!

CENTRAL MIKE SAYS:

"FIT IT RIGHT WITH A CENTRAL MIKE!"



SET No. 745RL
Outside Micrometers. Range: 0 to 4 inches by thousandths. Four micrometers, complete with Ratchet Stops, Lock Nuts and Standard Test Gauges in DeLuxe Plush-Lined Case.

SET No. 808
Inside Micrometer. Range: 1½ to 8 inches by thousandths. Complete with Extension Handle in DeLuxe Plush-Lined Case.

With a set of Central Mikes, a mechanic is ready for almost any measuring job. Their Certified Accuracy means fewer do-over jobs and less assembly time—assures that each fit is right—each job correctly done. Central's economical four-mike set is a necessity in every tool box: eliminates needless borrowing and saves many hours for the auto mechanic.

There's a Central Micrometer for every requirement. See your jobber or write for catalog.

THE CENTRAL TOOL COMPANY
462 WELLINGTON AVE., CRANSTON 10, R. I.

CENTRAL *Certified Accuracy* **MICROMETERS**

Largest Selling Micrometers in the Automotive Field, throughout the World.

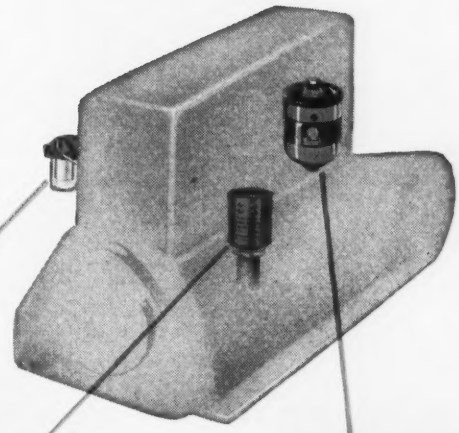
"You ain't seen nothin' yet!—that was his SLOW ball!"

NOW!

NEW MARKETS! NEW PROFITS! WITH 3 GREAT FRAM FILTERS!

Stock 'em! Sell 'em!

Sell your customers greater engine protection with Fram's three great Filters. Each Filter you sell means immediate profits *plus* repeat sales of genuine Fram Replacement Cartridges! Always ask, "HOW'S YOUR OIL FILTER?" It helps you get under the hood to Fram Filter sales! Yes, and by asking Fram's sales-getting question you'll pave the way to more sales of oil, oil changes, fan belts and other accessories!



NEW Fram Gasoline Filter

Removes *both* water and solids from gasoline. Protects finely adjusted modern carburetor mechanisms. Four tailor-made models service 85% of all cars and light trucks. Universal model fits most others. One replacement cartridge fits all models, gives you a new chance for a sale *every time* you lift hood because cartridges can be replaced *while car is being gassed!*

NEW Fram Crankcase Air Filter

Replaces conventional breather caps. Protects engines where *most* dirt enters. Fram's Crankcase Air Filter actually "Cleans the air your engine breathes." Universal adaptors fit most oil filler pipes. Three sizes of replacement cartridges are available for all operating conditions!

FAMOUS Fram Filcron Filter

"Cleans the oil that cleans the motor!" Fram's Filcron Filter brings you plenty of repeat business on genuine Fram Replacement Cartridges. There are over 8,500,000 cars on the road today equipped with Fram Filters. Each one requires a minimum of two replacement cartridges per year. So ask *every* customer, "HOW'S YOUR OIL FILTER?" Fram Corporation, Providence 16, R. I. *In Canada*, J. C. Adams Co., Ltd., Toronto, Ontario.

MA

FRAM *Oil·Air Gas* FILTERS

The sensational new

AUTO-LITE

Resistor

SPARK PLUG

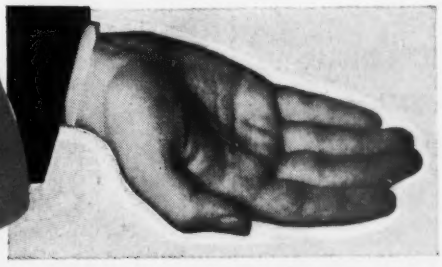
No other spark plug will give you such performance...

WITH a set of new Auto-Lite "Resistor" Spark Plugs in their cars your customers will immediately experience the benefits of better gasoline economy, a smoother engine throughout the entire speed range, improved radio reception, and up to 200% and more longer electrode life.

Auto-Lite engineers, working with leading car manufacturers, spent years in research to make this revolutionary spark plug development possible. Today it's a reality. So to give your customers the spark plug that delivers the finest in engine performance, the maximum in engine economy, stock and sell Auto-Lite "Resistor" Spark Plugs. Distribution is being expanded as rapidly as possible.

Toronto, Ontario — THE ELECTRIC AUTO-LITE COMPANY — Toledo 1, Ohio

HERE'S WHAT IT IS—



The Auto-Lite "Resistor" Spark Plug is a scientific development, ignition engineered by Auto-Lite working with leading car manufacturers. It makes practical a wider gap setting, which in turn promotes such benefits as a smoother engine idle, improved gasoline economy, and a reduction in misfiring by the burning of leaner mixtures to save gas dollars. In addition to all of these features, the "Resistor" Spark Plug reduces spark plug radio interference* below acceptable minimum levels, and increases electrode life up to 200% and more.

*Within 35 mv/m from 540 kc. to 150 mc. at 50 ft.

HERE'S WHAT IT DOES

Promotes Smoother Idling because the spark gap can be given a wider initial setting, which helps eliminate occasional missing.

Saves Money by burning leaner mixtures for improved gasoline economy at idle and throughout the speed range of the engine.

Reduces Misfiring occasioned by lean spots in the carburetion.

Reduces Ring and Cylinder Wear because improved ignition minimizes washing away of lubrication by raw unburned gasoline as the result of occasional misses.

Increases Electrode Life up to 200% and more by virtually eliminating inductive phase of spark discharge. Wider initial gap setting is made practical.

Suppresses Spark Plug Interference to assure clear radio, radio telephone, radar and television reception.

Auto-Lite Spark Plugs (Patented in U.S.A.)

Pop O'Neil . . . . . CONTINUED FROM PAGE 92

"Larry, I'm just an old man with old-fashioned ideas," he said. "I think a guy that's drawin' wages ought to do more for 'em than just walk up to the pay window every Saturday."

As soon as Pop had turned away, Tommy hurried over to Larry and found the latter muttering to himself. "It's cracks like that," he was saying, "that burn me up. What's he think I do around here all day?"

Tommy grinned. "Pop said he was trying to figure that out the other day," he said.

"Drop dead," growled Larry. "But before you do, run an oil-pressure test on that Buick."

"I told you," said Tommy.

"If you sounded any more like Pop," said Larry savagely, "I'd swear I was hearin' an echo. Now get goin'."

Three quarters of an hour passed, during which Larry finished a ring job. He walked over to the Buick and was surprised to find Tommy racing the engine.

"Hey what d'ya think you're doin'?" demanded Larry. "I told you to run an oil-pressure test."

"I did."

"What 'd it show?"

"The bearings are okay," said Tommy.

"How about the camshaft bearings?"

"They're okay too."

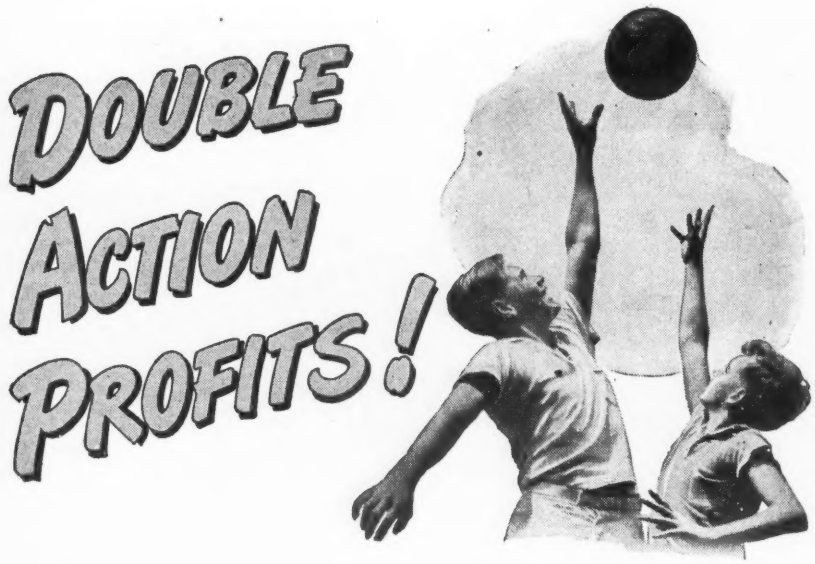
"Then what are you up to now?"

"I'm taking out different clutch retaining screws to see whether the clutch assembly is out of balance."

"And where, if it ain't revealin' no top secrets, did you ever get a screwball idea like that?"

"We had an Olds in here a while ago," said Tommy. "Pop showed me how to lick the roughness in the engine. We took out a screw at a time till we found the heavy side. Then we drilled out enough metal to make it balance."

CONTINUED ON PAGE 98



1. ADVERTISING that brings 'em in!

Week after week, month after month, Pennzoil reaches 5 out of 6† car owners in your community, directs them to your place of business at "this sign of better dealers"!

2. PERFORMANCE that brings 'em back!

Because of its outstanding performance, Pennzoil attracts and satisfies the buyer of *quality*—the steady customer—the best bet for all your services and merchandise!

Sending you customers, then holding them with second-to-none performance, offers you a double action profit opportunity that's well worth investigation. Find out about it from your Pennzoil distributor . . . or write to us for his name.

SOUND YOUR Z
100% Pure Pennsylvania
PENNZOIL
Safe Lubrication

†OVER 45 MILLION REGULAR SELLING MESSAGES CIRCULATED EVERY MONTH!

THE PENNZOIL COMPANY • Executive Offices • OIL CITY, PA.

*Trade-mark Registered

Member Penn Grade Crude Oil Ass'n., Permit No. 2

PENNZOIL* MOTOR OIL & LUBRICANTS

"She's always wanted an ivy covered cottage."

60-Ton—Movable Head—Air-operated Hydraulic Press. With or without 3-Ton Arbor Press and Test Centers. Turns out more work—more efficiently.

Manley offers a high quality line of automotive service equipment—Jacks, Wrecking and Floor Cranes, Engine Stands, Trestles, Air-operated Tire Inspector—in all, 22 items. See your Manley distributor.

ACCO York, Pa. • Chicago • New York • Portland • San Francisco • Bridgeport, Conn.

TRADE MARK

MANLEY MANUFACTURING DIVISION
AMERICAN CHAIN & CABLE

MANLEY Automotive Service EQUIPMENT

The Best Equipped Shop Gets the Profitable Business

Pop O'Neil . . . . . CONTINUED FROM PAGE 96

"What a dope! exclaimed Larry. "A Olds has a rough engine, so you try to cure a knock in a Buick with the same medicine."

"I just thought—" began Tommy.

"I already done all the thinkin' that's necessary. I said the trouble was either bad mains or misaligned rods in this one!"

"You said main bearings," said Tommy.

"Okay, okay," said Larry, raising his voice in annoyance. "But I changed it. Now start pullin' them rods."

Tommy was dropping the pan when he felt a jolt on the sole of his left foot. Then he heard Pop O'Neill's voice. "What did the oil-pressure test show?" Pop asked.

"Bearings were all okay," said Tommy.

"Then what are you doin' now, gettin' ready to pull the rods?"

"Larry said—"

"Well get outa there."

When Tommy crawled out, Pop was already questioning Larry.

"He was doin' it because I told him," Larry was answering. "And if he hadn't wasted an hour on a screwball idea of his own he'd of had the rods out by now."

"What was the idea?" asked Pop.

Larry laughed. "Aw the dope was takin' the clutch-retainin' bolts outa the flywheel."

"Hm," commented Pop.

"Anybody knows you don't get no knock from that."

"No, but the kid had an idea."

"Lousy," said Larry, "but still an idea."

"Maybe he didn't back out the right screws—or bolts."

CONTINUED ON PAGE 100

"Two dollars down — and your entire salary for the rest of your life."

SEALED POWER GI-60

CONTRACTING GROOVE INSERT

—the only dependable, economical way to fix worn top ring grooves for keeps!

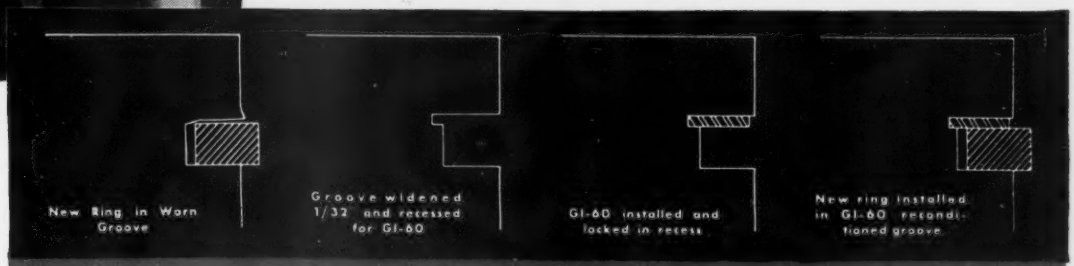
HEAT-TREATED spring steel resists wear, pounding, and intense heat better than aluminum or cast iron. That's the principle back of the Sealed Power GI-60 Contracting Groove Insert.

Sealed Power GI-60 is not a spacer. It doesn't float. It puts 1/32" of steel armor plate at the top of the top ring groove where the hardest wear comes. This protection is permanent.

First, the worn top ring groove is re-grooved to an absolutely true surface 1/32" wider than before, with a 1/32" recess at the top. Then the Sealed Power GI-60 Insert is installed, locking itself permanently into this recess. The "contracting" feature takes care of that. *This is the only dependable, economical answer to top ring groove wear.*

Without such treatment, new rings stick. They wear out fast. They cause cylinder wear. They waste gas. It only invites trouble to widen the groove and use a wider ring, because that changes the manufacturer's specifications. A floating spacer is simply a wider ring in two parts. GI-60 is the only proved satisfactory answer.

Your Sealed Power Distributor can install GI-60 for you. He has the special Sealed Power tools required. GI-60 means good profits for you and satisfaction for your customers. It makes old pistons new, keeps new pistons young. Ask your Sealed Power Distributor or write direct.



SEALED POWER PISTON RINGS

SEALED POWER CORPORATION

MUSKEGON, MICHIGAN • STRATFORD, ONTARIO

Pop O'Neill . . . . . CONTINUED FROM PAGE 98

"He had 'em all out before he got through."

"How about the flywheel studs?" said Pop.

"I tell you—"

"I mean the bolts that hold the flywheel to the crankshaft."

Larry's forward thrust jaw slipped back into a less pugnacious position. "Oh," he said.

"Crawl under there and see if the flywheel's loose."

Larry hesitated, then went to work.

"Well?" asked Pop after a few minutes.

"It's loose."

"Remove the clutch and tighten all the bolts. If that don't lick the knock then, let me know how you made out."

Larry crawled out and started for the bench in search of some tools. "The trouble with this shop is," he grumbled in a voice loud enough for Pop to hear, "nobody ever gets time enough to do a job right. Everything's rush, rush, rush. If I'd a had time to think it over, I coulda figured that one out, too."

Pop laughed. "I know you can think," he said. "In fact, you always remind me of that Frenchman's statue."

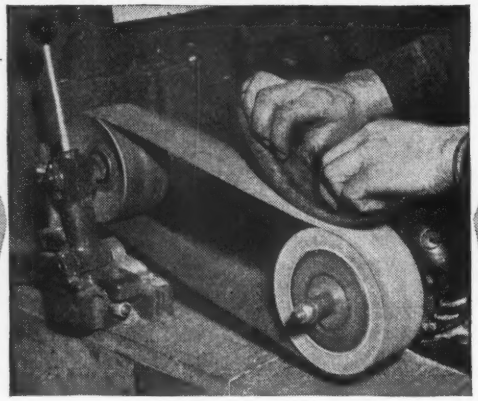
"What statue?" asked Larry suspiciously.

"The Thinker."

Larry rose to the bait. "What makes you think I'm like him?"

"Because," said Pop, "he's got a marble head."

Cash in on Bonded-Brake Service the BELT-BACKSTAND WAY



A "single pass" on a backstand belt is all it takes to grind the new brake shoes level, chatter-free and "toothy" for perfect band-to-shoe bonding. And in removing old bonded-type bands for relining, the worn "stuck-on" linings are whisked off quickly and easily with the same operation. But more, this same all-shop tool shortcuts scores of jobs because it grinds, polishes, sharpens, and finishes, quickly, economically — right.

The two big reasons are: 1) The abrasive belt is sharper and faster. 2) The resilient contact wheel delivers a soft wide-area grind. You "feel" the new cutting action the minute you try the belt-backstand method. And it's a simple inexpensive conversion for your present bench grinder. Write us for a free demonstration in your own shop.

BEHR-MANNING
(DIVISION OF NORTON COMPANY)
TROY, N. Y.

Answers To "What's This"

From Page 63

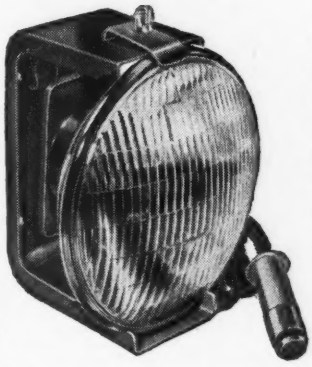
1. Car lock keyhole plate.
2. Tail light.
3. Section of horn ring.
4. Catch on floor of trunk.
5. Grill on cowl vent intake.
6. Rotary door latch.
7. Hood catch and spring.
8. Center of 1946 Plymouth grille.

"With hundreds of trees along this route you have to run into our tree!"

HERE'S A GOOD LINE FOR VACATION DAYS...

Help your Customers Go places and See things with these GUIDE LAMPS

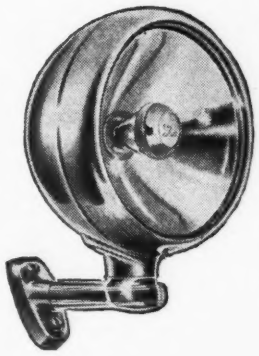
NEW GUIDE MULTI-PURPOSE LAMP



It's virtually a must accessory on a trip. In one unit, it combines a trouble lamp, a portable spotlamp, a campsite flood light, and a replacement for a Sealed Beam headlamp. Just plug its 13-foot extension cord into your customer's instrument-panel cigar lighter—and watch his eyes light up with interest when the lamp lights up his car.

Feature all three of these famous Guide lamps in your vacation-time displays...and demonstrate them to everyone who drives in for a pre-vacation tune-up. You'll be doing your customers a favor, by showing them how to light their way to safer, surer, more enjoyable vacation driving.

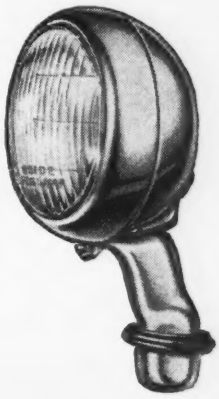
GUIDE SPOTLAMP



This year-round comfort and convenience is doubly useful on a vacation trip over unknown highways — for reading road signs, for illuminating house numbers, for lighting the path between car and cottage, for extra safety on the road.

GUIDE FOG LAMPS

There's no worse driving strain than traveling in foggy weather — and lots of vacationists know they'll meet with fog somewhere on their trip. These lamps when properly mounted and aimed, provide better vision ahead in fog and rain and mist—and better vision means added safety and easier driving.



UNITED SERVICE MOTORS

GUIDE LAMP—A UNITED MOTORS LINE

Available Everywhere Through

UNITED MOTORS DISTRIBUTORS

Guide LAMP
Division of General Motors
Anderson, Indiana

HELP AMERICA PRODUCE FOR PEACE
Turn in SCRAP Iron and Steel

Get Super-Safe

Don't be Late!

PLAY it *safe*. Call your jobber *quick* for your supply of *Super Pyro Anti-rust Anti-freeze.*

There *will* be more Super Pyro for next winter... *but there won't be enough for everybody!* Don't miss out!

Super-Pyro..NOW!

We're putting another bang-up advertising campaign to work for you . . . 4-color ads in the Saturday Evening Post and Collier's . . . *a red-hot ad a week* in local newspapers . . . even *more* billboards . . . *all* right through your peak selling season!

BE SUPER-SAFE . . . *order today!*

AMERICA'S FASTEST-SELLING ANTI-RUST ANTI-FREEZE

U. S. INDUSTRIAL CHEMICALS, INC.

Plymouth Fuel Gages

CONTINUED FROM PAGE 67

be in good operating condition. The tank and dash unit has numbers 1 and 2 stamped on them at the wire terminals. Run a jumper wire from terminal Nos. 1 and 2 on the dash gage to Nos. 1 and 2 on the tank unit. Run a ground wire from the tank unit to a good ground on the car, turn the ignition switch on and allow a minute or so for the dash unit to heat.

Operate the float arm of the spare tank unit and observe the dash unit reading. If the gage reads from empty to full when the arm is raised and lowered, it can be assumed that the dash gage is O.K. and that either the wiring or the tank unit is at fault in some way.

If the wires are reversed, the dash gage will read just the opposite. It will show full when it should show empty. Wires can also be reversed at the snap connectors located near the cowl left side panel just ahead of the body post. The wire colors at this point should match each other.

Check for grounds or open circuits.

If the dash unit is known to be in good condition but does not register correctly, the wiring between the dash unit and the tank unit may be grounded or open-circuited. When the quantity of fuel in the tank is known, the following information may be used as a guide for determining what part of the circuit is at fault.

If No. 2 terminal wire is open-circuited, the dash unit will show empty regardless of the amount of gasoline in the tank.

If No. 1 terminal wire is grounded, or No. 1 terminal wire is open-circuited, the dash gage will read ½ full when tank is empty, ¾ full when ½ full or full when tank is full.

CONTINUED ON PAGE 107

NEW Gabriel SALES BUILDERS!

HERE IS A LINE OF LEADERS NOW PACKAGED IN MERCHANDISING KITS TO HELP YOU SELL IN VOLUME LOTS!

GABRIEL T-20 THERMOSTAT MERCHANDISER

20 popular Thermostats in one colorful counter display box puts Thermostats out in front where sales are made.

GABRIEL SHOCK ABSORBER B-50 BUSHING KIT MERCHANDISER

50 Bushing Kits, packaged in a self-contained display box, ready to use on the counter, provides big sales appeal plus stock control.

GABRIEL COIL SPRINGS *Packaged in Matched Pairs*

Now you can have top quality replacement Coil Springs in matched pairs for uniform performance. Boxed for display and easy handling.

GABRIEL TRUCK PACKAGES

Oversized, heavy duty shock absorbers complete with brackets, studs and parts for simplified installation on popular trucks.

See or write your Gabriel jobber or distributor today for complete information.

THE GABRIEL COMPANY CLEVELAND 3, OHIO

"Hogan isn't true to tradition — he's got every girl in port!"

Willard

"SAFETY-FILL" BATTERIES

Sell Quicker, Easier at Greater Annual Profit!

WILLARD QUALITY

Willard research, design and engineering skill have combined to create Willard Quality. Manufacturing skill enhances it. Rigid inspection protects it. When you sell a Willard you sell quality —built-in quality. Your customers can depend on it . . . for Quick Starts . . . for Long Life . . . for thoroughly satisfactory battery performance.

WILLARD STORAGE BATTERY COMPANY

Cleveland • Los Angeles • Dallas • Memphis • Portland • Toronto

Willard

THERMOSTATICALLY CONTROLLED FAST CHARGER-TESTER
ASSURES

FULL CHARGES
FAST CHARGES
SAFE CHARGES

WILLARD QUALITY THROUGHOUT

Every component part of the Willard Fast Charger-Tester has been designed to meet Willard quality standards—every part has been rigidly tested. The Willard Fast Charger-Tester is designed and built to fast-charge safely . . . to test accurately and to last a long time.

WILLARD STORAGE BATTERY COMPANY · Cleveland · Los Angeles · Dallas · Memphis · Portland · Toronto

Plymouth Fuel Gages

CONTINUED FROM PAGE 104

If No. 1 terminal wire is grounded dash gage will read empty when tank is empty, ¼ full when tank is ½ full or ½ full when tank is full.

Open circuits may be caused by a broken wire at any point along the entire fuel gage circuit. Poor connections at the wire connectors near the hand brake bracket or at the terminal connections at either the dash unit or the tank unit can also cause an open circuit. A grounded wire may be due to broken insulation allowing the wire to contact bare metal at any point along the entire length of the fuel gage circuit.

Before proceeding with a test for grounded or open circuits, make sure that the wires connected to the dash unit terminals marked "1" and "2" are connected to the corresponding tank unit terminals. To determine whether the wire circuit is open or grounded use a test light as follows:

1. Disconnect the wire at the dash unit terminal marked "1" and insert a 6 C.P. bulb in series between the end of the wire and ammeter, as shown in the illustration. Disconnect the wire from terminal marked "1" on the tank unit.

CONTINUED ON PAGE 108

A COMPLETE Tire Department

Includes TIRE REPAIRS!

Get your tire repair profits the quick, easy

...BOWES WAY

● Figure it from the motorist's angle. The dealer who gives him good tire *repairs* is the one with the inside track to sell him *new* tires. Good repairs are the surest way to win and keep customers. So if you want a complete tire service you can't have it with new tires alone . . . you've got to be set up for tire repair.

It then becomes a question of how you can give *dependable* tire and tube repair the easiest, quickest way. That's where the Bowes Method comes in. With a minimum of time and effort the Bowes "Seal Fast" dealer makes money three ways . . . from the repairs themselves, from the sale of reconditioned tires, and from new tire sales. Let your Bowes distributor prove it to you!

BOWES SEAL FAST

BOWES "SEAL FAST" CORPORATION
INDIANAPOLIS 7, INDIANA

Plymouth Fuel Gages • CONTINUED FROM PAGE 107

2. If the test light bulb burns normally when the wire for terminal marked "1" on the tank unit is disconnected, the circuit is grounded.

3. Ground the wire, disconnected from the tank unit terminal marked "1", to any bare metal surface of the body. If the test light bulb burns, it can be assumed that the circuit is complete. If the test light bulb does not burn under this test, the circuit is open due to loose wiring connections or a broken wire.

4. Use the same procedure as outlined in steps 1, 2, and 3, above to test the wire connected to terminals marked "2" on the dash unit and tank unit.

The wires connected to the terminals marked number "1" and "2" on the dash unit pass through a wiring harness to snap type terminal connectors near the cowl left side panel just ahead of the body "A" post. At this point the wires are clipped to the cowl side panel just behind the hand brake lever.

From the snap connectors the wires pass through the body "A" post to the roof panel section. The wires are clipped along the roof panel above the doors and windows on the left side of the body. At the rear of the roof panel section, the wires are clipped to the side of the luggage compartment and continue under the floor mat to the tank unit.

After the dash unit and wiring have been [illegible] and found satisfactory, [illegible] be assumed that the tank unit or its installation, due to improper grounding, is at fault.

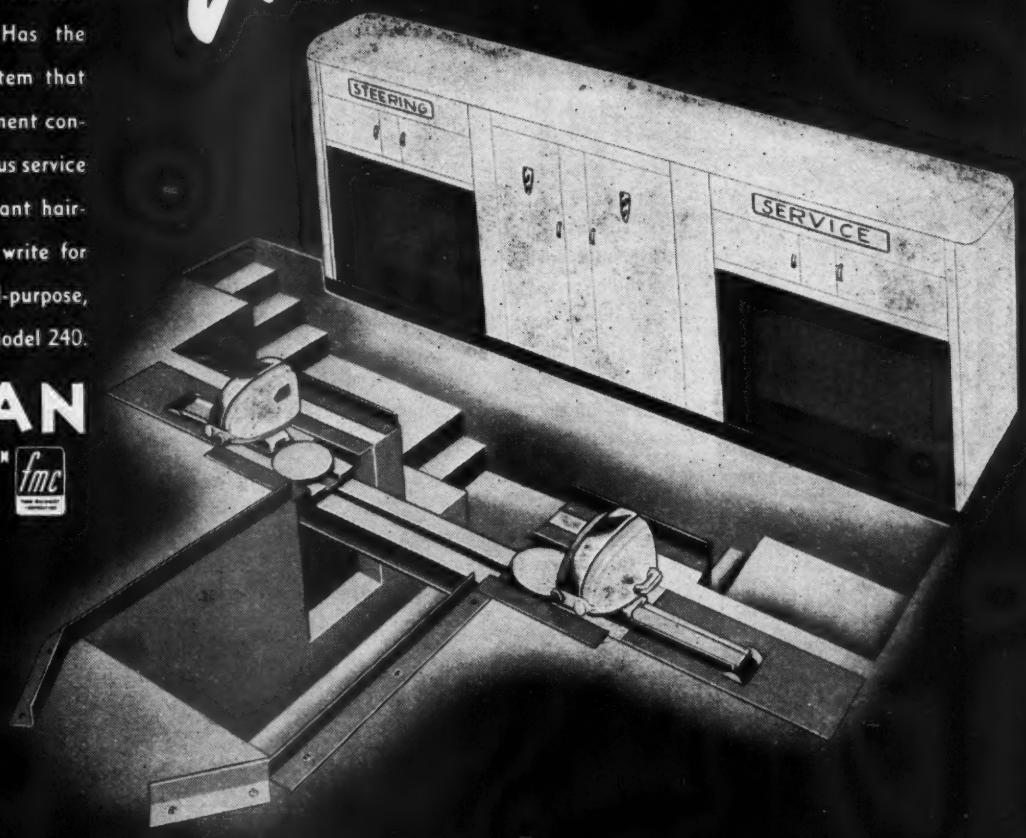
To determine whether the tank unit is faulty, remove it from the tank and connect it to the dash unit in place of the spare tank unit as shown in figure 2. Operate the float arm of the tank unit and observe dash unit indications. If the dash unit indications are correct, it can be assumed that the grounding of the tank unit was not satisfactory. A good ground should be obtained by insuring that the tank unit mounting screws make good metal-to-metal contact between the tank unit and the tank.

Handles Tread Widths from 48" to 90"!

John BEAN

HEAVY DUTY VISUALINERS

All models and makes of passenger cars, trucks and buses can be handled by the new John Bean universal Visualiner. Has the exclusive new optical light ray system that shows a graphic picture of all alignment conditions. Rugged enough for continuous service on the heaviest vehicles with constant hair-line precision. Ask your jobber or write for complete information on the all-purpose, profitable Heavy Duty Visualiner, Model 240.



JOHN BEAN

Division of FOOD MACHINERY CORPORATION

LANSING 4, MICHIGAN

fmc

WHEEL ALIGNERS AND CORRECTION TOOLS . . . WHEEL BALANCERS AND BALANCING TOOLS . . . WEIGHTS . . . CAR WASHERS

British Ford . . . . . CONTINUED FROM PAGE 68

Under a plan developed by the Ford Motor Company, approximately 12,000 of these smaller passenger vehicles and trucks will be made available during the next few months and sold through a limited number of direct and associate dealers. Direct dealers have been appointed in New York, Washington, Philadelphia, Boston, and Wilmington.

More than 122 associate dealers will handle the new line, and the number of dealers is expected to increase as the program gets under way. Distribution and sale of the British line may also be extended to other parts of the country, but not all Ford dealers will carry the passenger car and truck line. Parts and service facilities will be maintained only by dealers participating in the foreign sales program.

All of the passenger car and van models are powered by four-cylinder, 30 horsepower engines, capable of speeds up to 63 miles an hour. The passenger cars average better than 28 miles per gallon. Choice of colors is Black or Honey Beige, and the upholstery in the Anglia model is simulated leather. There is a choice of cloth or genuine leather upholstery in the Prefect model.

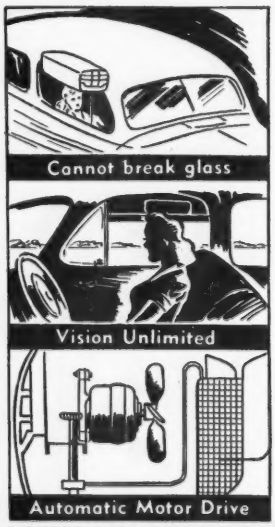
Complete parts, maintenance and repair service will be offered by all Ford dealers carrying the new line, and complete parts shipments will accompany the first deliveries of cars and vans. It is said that the supply of parts will be maintained at levels which will guarantee prompt service to customers. Service schools are now being conducted to familiarize dealer personnel with the various mechanical and operating features of the new line.

The Ford Motor Company recently established an Import Sales Section to handle all administrative matters related to the import of the Anglia, Prefect, and Thames products. It maintains an office in the Grand Central Terminal Building, New York City.

A *Real* PROFIT . . . from this *Real* CAR COOLER *if you act now!*

WINTER-BREEZE

Electrically Driven car cooler!!



YOU'VE realized for years the profits you could make with a *really effective* car cooler . . . fully automatic . . . with ample cooling capacity *even when car is parked* . . . smartly streamlined and in colors to harmonize with the most beautiful cars of this or any other year!

Here it is . . . plus! Efficiently engineered, precision built . . . built-in pump, 3200 RPM low amperage DC motor . . . priced to please the customer and reward the seller who can act NOW!

Co-operative dealer advertising! The supply of quality components required for *WINTER BREEZE* Coolers will hold this year's production far below demand. Will YOU cash in on this opportunity? Immediate shipment. The coupon below will bring complete information by return mail!

WRITE NOW

AUTOMOTIVE DIVISION FEDERAL IDENTIFICATION CO.
1910 CLASSEN BLVD. Oklahoma City 9, Oklahoma

YES, rush discounts, details on "Winter Breeze".

We might sell _____ (No.) this summer.

Your Name _____
Firm _____
Address _____
Type of Business _____ Wholesaler ☐ Retailer ☐

"I don't believe he knows what they're for!"

MORE MOTORISTS USE MORE SIMONIZ THAN ANY SIMILAR PRODUCT

"2 out of every 3 ask for SIMONIZ!"

"With more new cars on the road, my SIMONIZING sales are really booming. I've found that a new car needs SIMONIZ for protection to the finish ... and to keep colors from fading. Older cars need SIMONIZING, too ... to restore the luster. Detroit motorists know SIMONIZ ... and depend on it. Matter of fact, two out of every three ask for SIMONIZ!"

Edward W Snell
9500 Greenfield
Detroit, Michigan

MOTORISTS WISE

SIMONIZ

"SIMONIZ" . . . TRADE MARK REG.

It pays to satisfy your customers . . . to supply those who use finish maintenance products and expect you to have a supply on hand. Since two out of every three ask for SIMONIZ and Simoniz Kleener, your service needs demand that you stock them. Remember, a satisfied customer is one who will look to you for other services and accessories.

Remember, too, you can boost your service sales by featuring a SIMONIZING service. Many of your customers expect it. So don't pass up this chance to double your profits. Write today for complete details on the operation and promotion of a Simoniz Service Station. There's a FREE manual waiting for you!

THE SIMONIZ COMPANY, CHICAGO, U.S.A.

Mechanical Close-up

• • CONTINUED FROM PAGE 65

Coach Special, was the only semi-stock car entered in the race and was in sixth position at the 161st lap. The car was performing well and might have finished even better than 6th. The only changes made on this engine to pep it up were an increase in compression ratio, the use of three carburetors, a different camshaft and a shorter piston stroke. The torsilastic springing of the chassis made this car handle exceptionally well.

Although Bill Devores' car, the six wheeler, did not finish in the money, it gave a very interesting performance. It is the first six wheeler ever run on a race track, and I believe that after all the bugs are ironed out it will become popular around tracks.

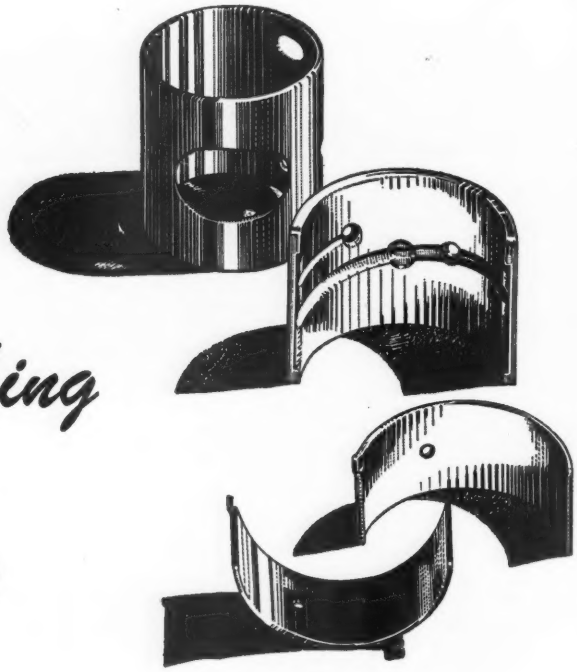
The Kurtis Built cars are becoming more and more popular, and the drivers like the way they handle. They employ torsion bar suspension which eliminates coil and leaf springs.

Tony Bettenhausen was eliminated by a broken drive shaft. Hal Robson retired because of a broken valve. Joie Chitwood with an oil leak.

The only mishap of the day occurred when Duane Carter's car broke an axle and went into a spin and hit the wall. Carter was uninjured but the caution light was put on warning drivers to go slow and hold their positions for several laps, otherwise the speed for the 500 miles would have been still higher.

Rose's and Holland's cars, the Blue Crown Specials built by Lou Moore, are identical in every detail. These cars made only one pit stop, to take on gas and front tires. Rose was in the pits a minute and 24 seconds. Since Moore's cars have only four cylinders this gives him an edge over the eight cylinders in better gas mileage. Duke Nalon drove a remarkable race in the Novi Special, the mate to the one in which Ralph Hepburn

CONTINUED ON PAGE 114



Everything

YOU

NEED

IN

Automotive Bearings

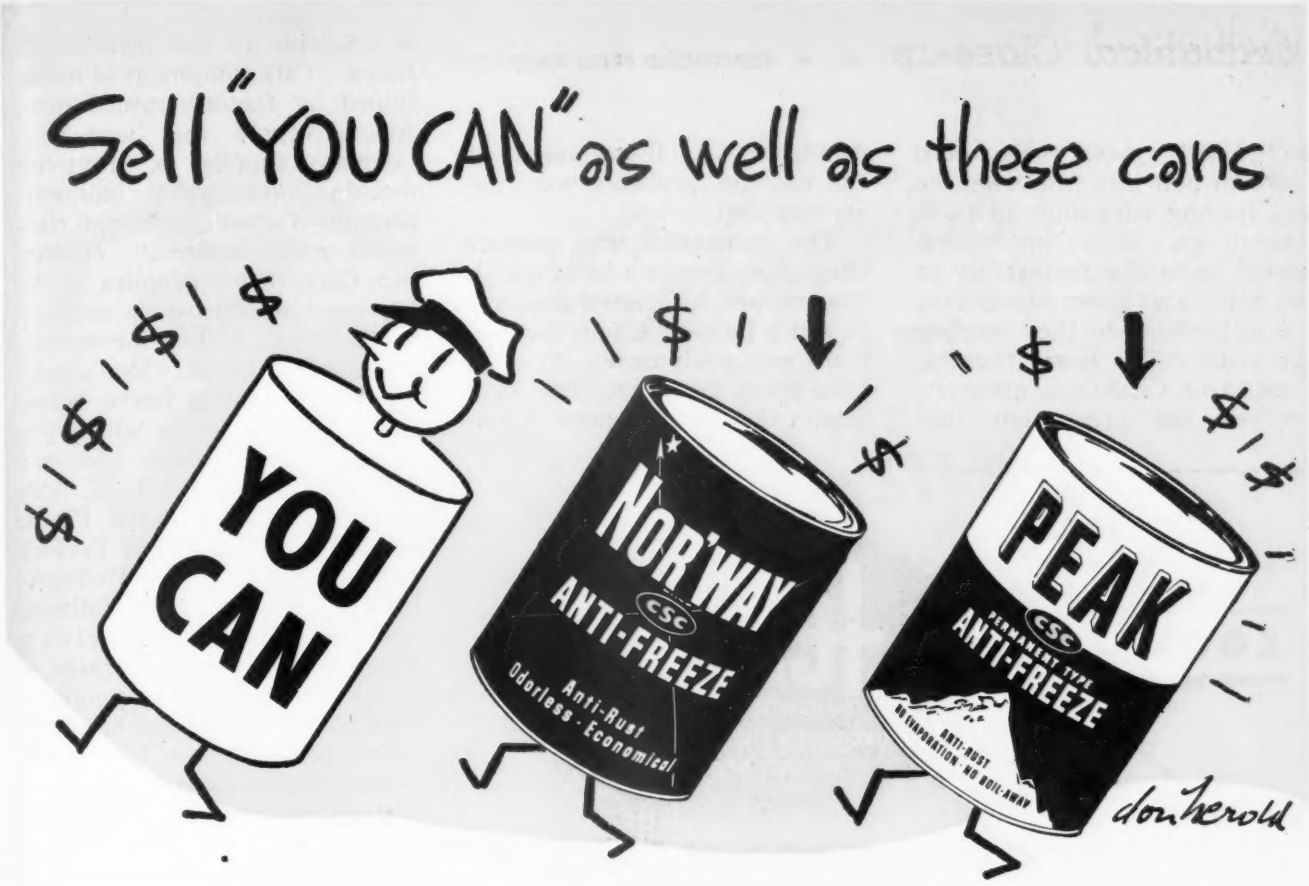
Delays in securing automotive replacement parts are expensive luxuries. When you need bearings they can be avoided. Simply call your local Johnson warehouse. Your order will be shipped the same day received. The line is complete . . . main, con-rod and camshaft bearings . . . piston pin, rocker arm, starter, generator, water pump, steering knuckle, spindle bolt, steering gear, clutch pilot, propeller shaft and spring bushings. Every item is the highest quality, made to the same standards of precision as original equipment. Write today for a copy of our new catalog.

JOHNSON BRONZE

SLEEVE BEARING HEADQUARTERS

455 S. MILL STREET NEW CASTLE, PA.

"Is this the tribe that swaps wives?"



We are starring YOU in this great national CAN-CAN

In every ad on NOR'WAY* ANTI-FREEZE and PEAK* ANTI-FREEZE in our great advertising can-paign in national magazines, we are boosting YOU and your "YOU-CAN" along with our anti-freezes.

We never say to the public: "Pour a can into your radiator." We always say "Get a good service man to prepare your cooling system for winter."

There is up to FOUR TIMES as much profit for you in radiator service if you'll sell YOU-CAN in addition to cans of cooling system products. We want to win your friendship by helping you to gather these plus profits.

If you'll BE the cooling system expert we say you are, you can profit by selling fan belts, hose connections and clamps, gaskets, etc., and by charging for flushing with NOR'WAY CLEANER or QUICK FLUSH and for installing NOR'WAY STOP LEAK, on top of your normal profits on NOR'WAY ANTI-FREEZE and PEAK ANTI-FREEZE.

Here are the publications we are using to sell your YOU-CAN as well as our products this fall:

SATURDAY EVENING POST	TIME
COLLIER'S	NEWSWEEK
COUNTRY GENTLEMAN	BUSINESS WEEK
PATHFINDER	CAPPER'S FARMER

*Reg. U. S. Pat. Off.

SPECIALTIES DIVISION

COMMERCIAL SOLVENTS CORPORATION

17 East 42nd Street, New York 17, N. Y.

CSC

Mechanical Close-up • • CONTINUED FROM PAGE 112

was killed. Low fuel forced Duke to pull into pits when he was leading with only 15 more laps to go. This Novi is reported to be the fastest car at the track and gives the drivers a real thrill when they step on the pedal. Ted Horn, the National AAA Champion, made out well on lap prizes but just couldn't get to the winners; at the end he probably was conserving fuel.

The mechanics who prepare these cars deserve a lot of credit. The entrant is assigned a garage in which he must supply his own tools and equipment. In addition some manufacturers have set up testing equipment which is available to the men at all times. This equipment is maintained by factory-trained men. Among others the Bear Mfg. Company supplies a front-end machine and wheel balancer. Stewart-Warner supplies an electronic wheel balancer. Magnaflux Corporation supplies an X-ray machine. Firestone supplies the tires and a shop for mounting them. Barnett Equipment Co. had a mobile brake shop. Other manufacturers with office space in the garage area are Fram Filters, R. P. M. oil, Alemite, Blue Crown Spark Plugs, Champion Spark Plugs, Perfect Circle Rings, and the Hollingshead Company. Lou Vollmer, representing the American Bosch Company, has a shop in which he takes care of magneto repairs. Lou has been handling these repairs for the past twenty-five years at the track.

Here is how most of the garages operate. After having the steering parts Magna-fluxed, and the whools aligned and balanced, the car is fired up and is ready for test runs on the track. Usually the driver assigned to the car gives it these runs. He observes how the car rides, steers and performs. Then he returns to the pits where the mechanic immediately removes the spark plugs and studies the color of the porcelain to learn

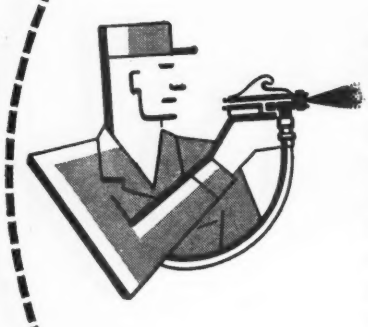
CONTINUED ON PAGE 116

LOOK TO

fendix®

THE AUTOMOBILE UNDERBODY PROTECTIVE COATING AND SOUND DEADENER

FOR BETTER PERFORMANCE—



. . . because Fendix is a blend of service-proved materials, scientifically formulated to provide a higher solids content. Greater uniformity assures you easier spraying—more coverage per drum—and best performance in rust prevention and sound deadening from only a 1/16" undercoating. And remember, only Fendix has the special safety solvent—it's safer to store and use.

FREE *A complete and continuing program of free training, service, and advertising material. Write for a Davison Factory Representative or authorized distributor to call and give you the full story of why there is—*

MORE FOR YOU FROM FENDIX

Fendix is listed under Reexamination Service of Underwriters' Laboratories, Inc.

THE DAVISON CHEMICAL CORPORATION

Progress through Chemistry

BALTIMORE-3, MD.

©TDCC

OVER 30,000,000 IN USE TODAY

One of the most reliable parts of an engine is the AC Fuel Pump, heart of the fuel system. That's because it is *first quality* in design, material and manufacture . . . built to meet the engine maker's own requirements.

QUALITY FEATURES

A comparative analysis shows that there are from 27 to 38 additional quality features built into AC Fuel Pumps. These quality features are in:

The Diaphragm . . . Castings . . . Top Cover . . . Link . . . Rocker Arm . . . Drain Petcock . . . Screen . . . Valve Cage Retainer . . . Lock Washers . . . Bushings and Linkage . . . Valve Cages . . . Rocker Arm Pin.

It's the many little operations that make quality. Protect your reputation . . . assure customer satisfaction . . . by replacing worn pumps with new AC's and making repairs with authentic AC Repair Kits and Diaphragm Kits.

AC FUEL PUMPS

SEND FOR AN AC PUMP SHOP MANUAL

Field Service Department, AC Spark Plug Division, G. M. Corp.
910 Mott Foundation Building, Flint 3, Michigan

Gentlemen: Please send at once, no charge, the AC Shop Manuals checked:

☐ How to Service Spark Plugs ☐ HOW TO SERVICE FUEL PUMPS
☐ How to Service Spark Plug Cleaner ☐ How to Service Air Cleaners
☐ How to Service Oil Filters ☐ How to Service Speedometers
☐ How to Service Ammeters and other Instruments MA-6

NAME_____
FIRM_____
STREET ADDRESS_____
CITY_____ STATE_____

 • • CONTINUED FROM PAGE 114

whether the carburetor mixture is rich or lean.

The various tests and adjustments usually take days before everything is working properly. Then the car is ready for qualification. After the car has qualified, it is taken back to the shop and disassembled again and every part in the engine is examined for possible failure. Many engines are taken apart two or three times. The mechanics prove their ability by coping with the most difficult technical problems, such as, bearing failures, overheating, carburetion, superchargers and many other things, all of which must be solved before race day. The mechanics are all friendly toward each other and are always willing to lend tools and advice, even to the one who might become the closest competitor.

Four cylinder engines are becoming more and more popular every year. This year out of the twelve cars running at the end of the race nine had four cylinders. An eight cylinder car has not won the race since 1940, but they have won pole positions in the last four races. Of the last 32 speedway classics, 15 have been won by the eight cylinder, 15 by four cylinder and two by six cylinder jobs. Twelve and sixteen cylinder cars have been used but have never succeeded in winning a race.

L-17 DeLuxe Oil Filter

A new replacement filter, with the element made of tightly wound cotton thread has been made available by the DeLuxe Products Corporation, of La Porte, Indiana. Threads are wound tightly around the center core, loosening gradually as they criss-cross, thereby forming innumerable layers of filtering surface. The criss-cross layers are said to prevent clogging of the core. Also available, states the manufacturer, are the filter and kit package for Chrysler eight cylinder C-39 engines.

For further information use coupon on page 72

"——This is Ethyl!"

Acceptance that's been earned!

IN the early days of the automotive industry, Ditzler made carriage finishes with which many of the first vehicles were painted. As these horseless carriages evolved into the modern automobile, Ditzler contributed to its improvement by developing and perfecting new and more durable finishes. These coatings are now being used in varying quantities by most of today's motor-car manufacturers. This acceptance has been earned solely by consistently *dependable performance.*

DITZLER'S RIP RAP
ideal Primer Surfacer

● Famous for good adhesion, exceptional filling properties, easy sanding and excellent hold-out. Rip Rap dries fast and feather edges to a mere shadow without cracking or crumbling. It is an ideal undercoat for lacquers and also works well under enamels. Rip Rap is available in Neutral Gray, Dark Gray, Red Oxide and White. Ditzler Color Division, Pittsburgh Plate Glass Company, Detroit 4, Michigan.

DITZLER

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

remaining 72 per cent came from cities of less than 25,000 population.

It is logical that any study of wages paid mechanics would include the question "What is your customer labor rate?" for labor charges to the customer are, for the most part, the basis for paying the mechanics. The poll of Pennsylvania dealers showed that metropolitan dealers, in all cities of 25,000 and over, including Philadelphia and Pittsburg, charged from $2.50 to $3.00 an hour.

Areas of less than 25,000 population reported a scale of customer rates beginning as low as $1.00 per hour.

33	dealers reported charging	$1.00-$1.25
200	dealers reported charging	1.26- 1.50
171	dealers reported charging	1.51- 1.75
427	dealers reported charging	1.76- 2.00
131	dealers reported charging	2.01- 2.25
468	dealers reported charging	2.26- 2.50
87	dealers reported charging	2.51- 2.75
5	dealers reported charging	2.76- 2.99
131	dealers reported charging	3.00
8	dealers reported charging	3.01- 3.50

Eighty-nine per cent of the dealers pay their mechanics on straight time basis—with hourly rates ranging from fifty cents to $2.50 an hour.

Approximately one-third of the dealers pay from $1.00 to $1.10 an hour to their mechanics; 30 per cent pay from $1.15 to $1 25 an hour; 20 per cent from $1.25 to $1.50 an hour.

Only 21 per cent of the dealers surveyed by P. A. A. reported that they pay their mechanics on a flat rate basis. The majority of these stated that the percentage allowed mechanics scaled from 40 to 50 per cent. Only 39 per cent of the dealers who pay mechanics on a flat rate basis guarantee weekly earnings on flat rate work.

On the subject of hours worked in dealer shops, the survey disclosed the following summary:

	Metropolitan Areas	Cities over 25,000 excluding Metropolitan Areas	Cities under 25,000 Pop.
Dealers Reporting	177	303	1224
40 hour week...	17%	7%	5%
44 hour week...	52%	37%	29%
48 hour week...	8.5%	13%	25%
Others varying up to 99 hr. week	22.5%	43%	41%

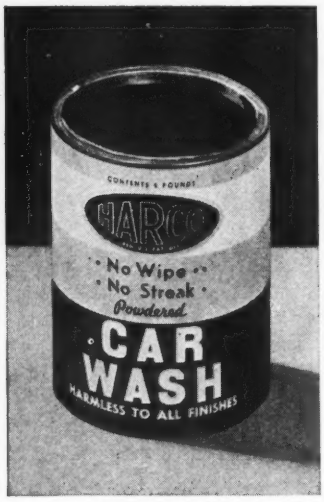
A state-wide analysis of the

CONTINUED ON PAGE 120

Get Them Clean!

with

HARCO Car Wash



No automobile can be properly cleaned without the use of a water softener. Without a water softener, you simply smear the grease and dirt around. Why stall around with cleaners that only do part of the job when you can do a perfect cleaning job without taking off the paint, with HARCO Car Wash.

HARCO Car Wash is a safe and economical water softener. It is a startling new product with the built-in no-wipe feature saving hours of costly labor. This feature also leaves the finish with a definitely improved lustre.

Contact your jobber, or write us direct for further details of HARCO Car Wash and the complete HARCO line.

Other Cleaning Products by

HARCO

CARBO SOLVE—Cleaner and Carbon Remover. Cuts cleaning time in half.

GREAS-OFF—the all-purpose degreasing solvent. Brush it on—Hose it off.

DRIVEWAY CLEANER—a quick action powder, compounded for fast, easy cleaning.

GREEN BAR SOAP—safe and economical.

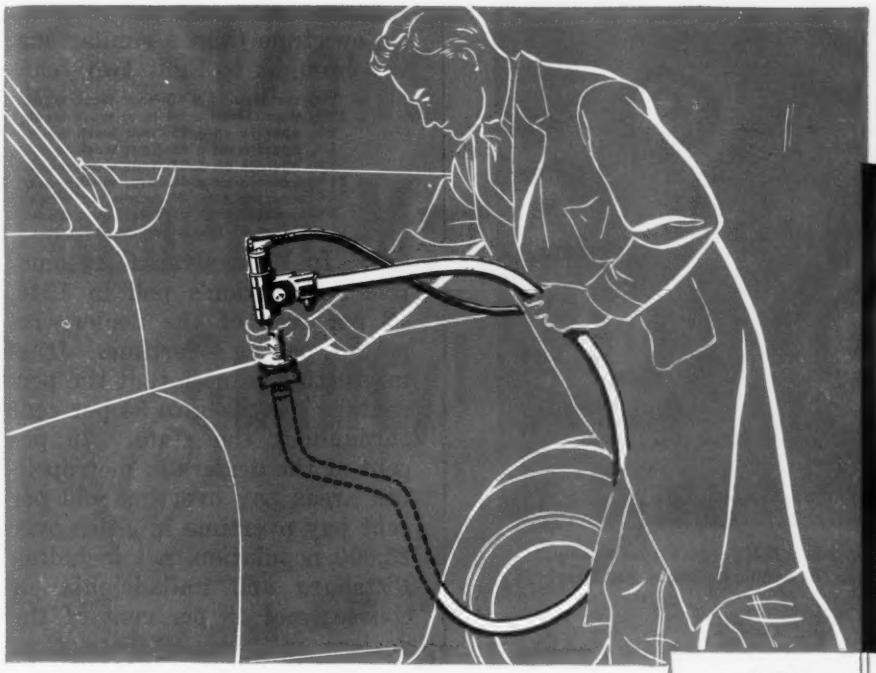
HARLEY SOAP COMPANY

Pierce and Orthodox Sts. Philadelphia 37, Pa.

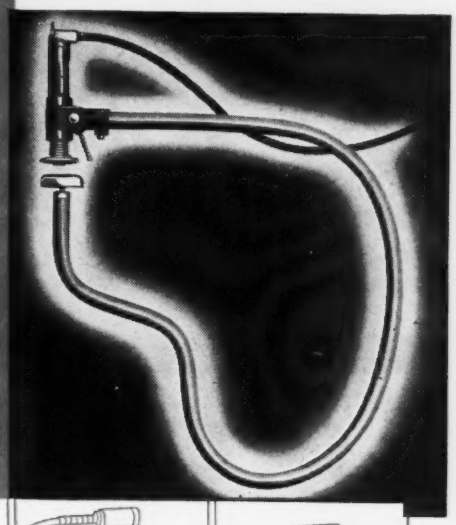
KEEP THE BUSINESS CLEAN

"Know anyplace I could raise fifty bucks in a hurry?"

TURN OUT TWICE AS MANY JOBS IN THE SAME TIME



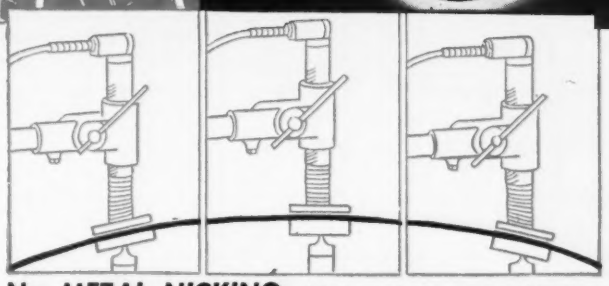
Five different frames are available with the Milwaukee Fender Hammer—to make it easy to reach hard-to-get-at spots.



Yes — do twice the amount of body work in the same time — without added help. The Milwaukee Fender Hammer does a finished job in half the time needed to do it by hand — easier — much better.

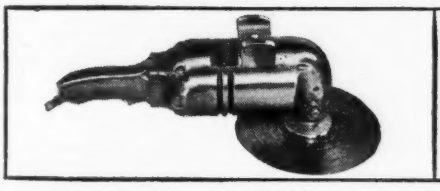
When you smooth out a dented turret top or wrinkled fender with a Milwaukee Fender Hammer, all it needs is sanding and painting — no nicks — no soldering — no shrinking, or filing operations.

Here's a tool that quickly pays for itself in just a few months' use in a busy shop—a tool that body-men like for its easier handling — for superior work turned out faster. Ask your jobber for complete facts and demonstration.

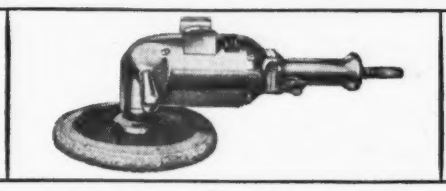


No METAL NICKING with the exclusive, patented Floating Head and Dolly of the Milwaukee Fender Hammer. This *mechanically guided Hammer Head and Dolly* are always parallel to the metal surface. Hammer blows are always at right angles to the metal, regardless of tilting or cocking of frame—cannot nick or stretch the metal.

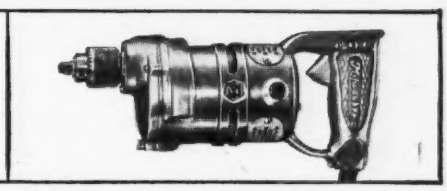
Do the whole job faster... with Milwaukee tools



Electric Sanders—with flexible spring steel safety pad. Savings in sanding paper alone pay for this tool in less than a year.



Electric Polishers—for high luster finishes at high speed — light weight — properly balanced.



Portable Drills—1/4 inch to 7/8 inch, heavy-duty production and standard types.

Free Booklet — describing complete line of Milwaukee Quality Tools sent postpaid on request — use coupon or write;

Milwaukee
QUALITY TOOLS

Milwaukee Electric Tool Corp.
5330 W. State St., Milwaukee 8, Wis.

Send your new 1948 Catalog.

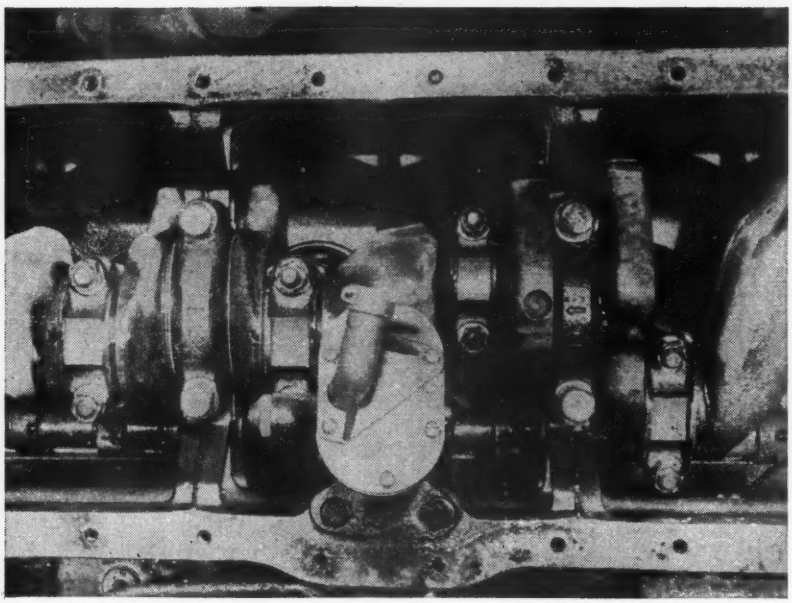
Name.....

Street.....

City.....Zone.....

State.....

How a "Half User" of Magnus 755 Became a "Full User"!



Typical #755 desludging job looking up into a Buick engine after having been desludged with Magnus 755 *without* dismantling. Screen has been removed to show clean condition.

A Cadillac dealer in a southern city had long been a regular user of Magnus 755 for cleaning carburetors, fuel pumps and similar parts with carbonized oil deposits. But they never had got around to using #755 for desludging their engines without dismantling, in spite of widespread industry acceptance. Then one day they ran into trouble.

Permanent anti-freeze solution had got into the valve lifters. Even after they had torn down the engine three times, the lifters were still giving plenty of trouble.

They tried Magnus 755 finally, because nothing else offered any promise of working. Four quarts of #755, plus two quarts of oil, were put into the drained crankcase, and the engine idled for one hour. When the hour was up, the lifters were making plenty of noise. The crankcase was drained, flushed out with kerosene and filled with fresh lube oil. The engine ticked over perfectly and the lifters were quiet. After driving the car himself for three days, the service manager turned it over to a pleased customer with everything working 100% right.

There's no question in this shop today as to what to do with any car brought in for service and overhaul. Number one step is desludging the engine with #755!

Have You Tried #755?

If you have never seen what #755 does in desludging an engine *without dismantling*, ask us to send you the full story and explain the profit possibilities it offers you.

MAGNUS CHEMICAL COMPANY
174 South Ave., Garwood, N. J.
IN CANADA — MAGNUS CHEMICALS, LTD.
4040 Rue Masson, Montreal 36, Que.
Service representatives in principal cities.

IN THE AUTOMOTIVE FIELD IT'S
Magnus
CLEANERS • EQUIPMENT • METHODS

Highlights on Wages and Hours in Dealer Shops

CONTINUED FROM PAGE 118

work week in 1704 dealers shops showed that:

More dealers now pay mechanics overtime than a similar survey brought to light two years

7% maintained a 40-hour work week
33% maintained a 44-hour work week
4% operate on a 45-hour work week
5% operate on a 46-hour work week
3% operate on a 47-hour work week
21% operate on a 48-hour work week
25% operate over 48 hours per week
2% operate with varying hours from 38 to 99 hours per week

ago. In Pennsylvania Automotive Association's poll in 1946, 48 per cent of the dealers reported paying overtime. It is interesting to note that the percentage has risen to 54 per cent throughout the state. 70 per cent of the dealers in metropolitan areas pay overtime; 58 per cent pay overtime in cities over 25,000 population, not including Pittsburg and Philadelphia, of course; and 48 per cent of the dealers in cities of less than 25,000 likewise pay overtime.

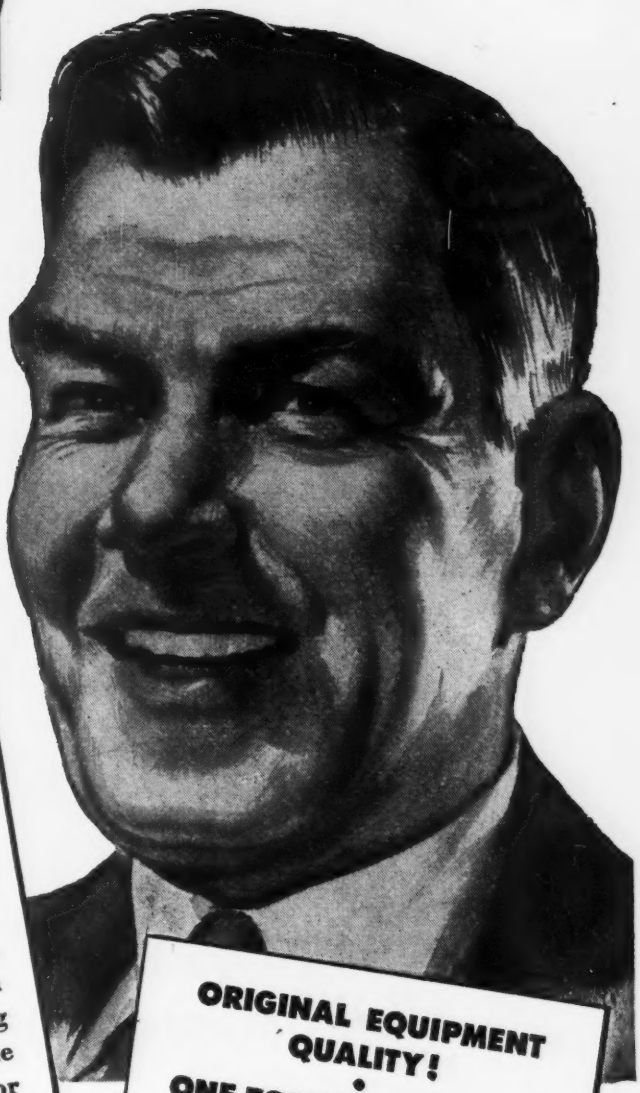
A majority of those who pay overtime on a daily basis, do so after eight hours of work. Those who pay overtime on a weekly basis indicated that such pay begins after either a 40 or 44 hour week.

A further survey of working

CONTINUED ON PAGE 122

"It's a question of who has the right of way."

EVERYBODY knows General Motors Quality!



and that means Inlite matched Brake Lining Sets sell easier, faster...build better business!

Each Inlite set is made uniformly to meet the highest General Motors standards of quality. Inlite's strength, flexibility, and resistance to water, heat and wear have been checked and tested in General Motors laboratories and on the Proving Grounds. And *each* set is matched to have the frictional values for the brake and vehicle for which it is designed. No wonder users everywhere know and demand Inlite brake linings.

And what's more, *one* top-quality Inlite line of 30 matched sets fits 448 models of cars and trucks. This means minimum investment, faster turnover, *more* satisfied customers and *more* sales and profits for you!

ORIGINAL EQUIPMENT QUALITY!
•
ONE TOP-QUALITY LINE, NO SECONDS!
•
PRE-SOLD MARKET!
•
SATISFIED CUSTOMERS!

A General Motors Product

UNITED SERVICE MOTORS

A UNITED MOTORS LINE

Available Everywhere Through United Motor Service Distributors

INLITE *Brake Linings*

INLAND MANUFACTURING DIVISION, *General Motors Corporation*, DAYTON, OHIO

conditions in dealer shops in Pennsylvania showed that almost half the dealers worked their mechanics four hours on Saturdays. Here's a breakdown on working Saturdays:

- 6% do not work on Saturday
- 49% work 4 hours
- 10% work 5 hours
- 21% work 8 hours
- 6% work 9 hours
- 8% work 2, 3, 6, 7, or 10 hours—of which total, 75% operate in towns under 25,000 population

Throughout the state, 74 per cent of the Pennsylvania dealers gave six holidays a year; 43 per cent of these pay their mechanics for time off. Of eleven per cent of the dealers reporting that they allow more than six holidays, 6 per cent grant holidays with pay.

On a state-wide basis 63 per cent of the dealers reporting said they paid mechanics for holidays worked on a straight time basis; 30 per cent for holidays worked on a time-and-half-time basis; 8 per cent double time for working on holidays.

Seventy-six per cent allow vacations with pay to their mechanics; 24 per cent do not.

USCC Report Skeptical Of Annual Wage Plans

The Chamber of Commerce of the United States remains skeptical of the guaranteed annual wage as a preventive of economic depression. In a recent report it urged employers to do everything possible to provide steady jobs for workers, but pointed out that many companies which tried guaranteed wage plans during the 1920's had to abandon them during the depression. The report adds that the approach to a guaranteed annual wage would have to be on something more broad in scope than an individual company basis, possibly on a whole industry, a series of industries, or on the entire economy and the government.

1947 Factory Sales From U. S. Motor Vehicle Plants*

PASSENGER CARS	
January	305,081
February	274,847
March	349,998
April	308,071
Total—4 Months	1,237,997
TRUCKS	
January	99,200
February	107,054
March	140,606
April	128,963
Total—4 Months	475,823
BUSES	
January	1,370
February	1,090
March	1,409
April	1,048
Total—4 Months	4,917
TOTAL MOTOR VEHICLES	
January	405,651
February	382,991
March	492,013
April	438,082
Total—4 Months	1,718,737

*Automobile Manufacturers Association

FOR FULL-RANGE BRAKE CONTROL

● You can't expect to service all cars—big and small, new and old—with the same friction material. And the best way to service *each* car is with a *combination* of brake linings.

Raybestos has developed 23 variations of brake lining materials—made by seven different processes—to do every brake job right. These brake linings come in correct combination as PG sets to meet individual specifications. With Raybestos PG sets, you can give *full-range* brake control—control for easy, positive slow-downs and quick, smooth stops.

Try it. *Full-range* brake control really sells. And today's market is the biggest in history—you can sell brake relines to 5 out of every 10 cars.

THE RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., Bridgeport, Conn.

Ray-BOND

AVAILABLE NOW!

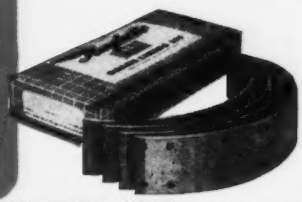
Raybestos is ready now with undrilled brake lining sets for use with bonding equipment. See your Raybestos jobber.

CHECK BRAKES RELINE WITH

Raybestos

AMERICA'S BIGGEST SELLING BRAKE LINING

RAYBESTOS-MANHATTAN, INC.



PG Proving Ground Tested BRAKE LINING • BRAKE BLOCKS • CLUTCH FACINGS • FAN BELTS • HOSE for Cars, Trucks, Buses and Tractors

Legally Speaking

Use of Property Limited by Owner

Ordinarily a repairman may use his business property pretty much as he pleases provided he does not create a nuisance. In general, a nuisance is a use of the property in a way that is harmful to the health, well-being or reasonable comfort of people living in the vicinity.

Discussing an owner's right to use his own property as he sees fit, the Supreme Court of New York recently said:

"Every person may exercise exclusive dominion over his own property and subject to such uses as will best serve his private interests. Generally, no other person shall say how he shall use or what he shall do with his own property. But this general right of property has its exceptions and its qualifications. "Use your own so as not to injure others," is an old maxim which has a broad application. It does not mean that one must never use his own so as to do any injury to his neighbor or his property. Such a rule could not be enforced in civilized society. Persons living in organized communities must suffer some damage, annoyance and inconvenience from each other."

In many communities the uses to which a property may be put are controlled and governed by zoning laws. *(Siviglia vs. Spinelli, 75 New York Supplement, 2nd series, 120).*

Better Understand It!

A repairman cannot expect much help from the court if, with his eyes open he signs a document without understanding its legal effect or the meaning of legal terms contained in it. The parties to a certain deed recently asked an Arkansas court to "reform" the deed.

CONTINUED ON PAGE 126

"She intends to have it understood from the start!"

MOBO MEANS MONEY

MOBO DEGREASING FLUID—for quick removal of grease, oil, grime and dead wax. Does not harm paint or hands and leaves no film. Excellent for chassis, motors, parts, floors and grease pits.

MOBO HYDRAULIC BRAKE FLUID—a heavy-duty, all-season brake fluid for passenger cars, trucks and buses. Works efficiently in hot or cold temperatures. Gives long-lasting service . . . mixes with all approved fluids and has no injurious effect on any metal or rubber in the braking system.

In the automotive service line, MOBO takes top position for customer acceptance. The MOBO name is as old as automobiles and MOBO products sell consistently for dependable profits.

Write and ask for MOBO'S 1948 program for lower inventory, increased profits and faster turnover.

JOHN T. STANLEY CO., Inc. • 626 West 30th Street, New York 1, N. Y.

THE STROMBERG CARBURETOR REPAIR KIT

SAVES

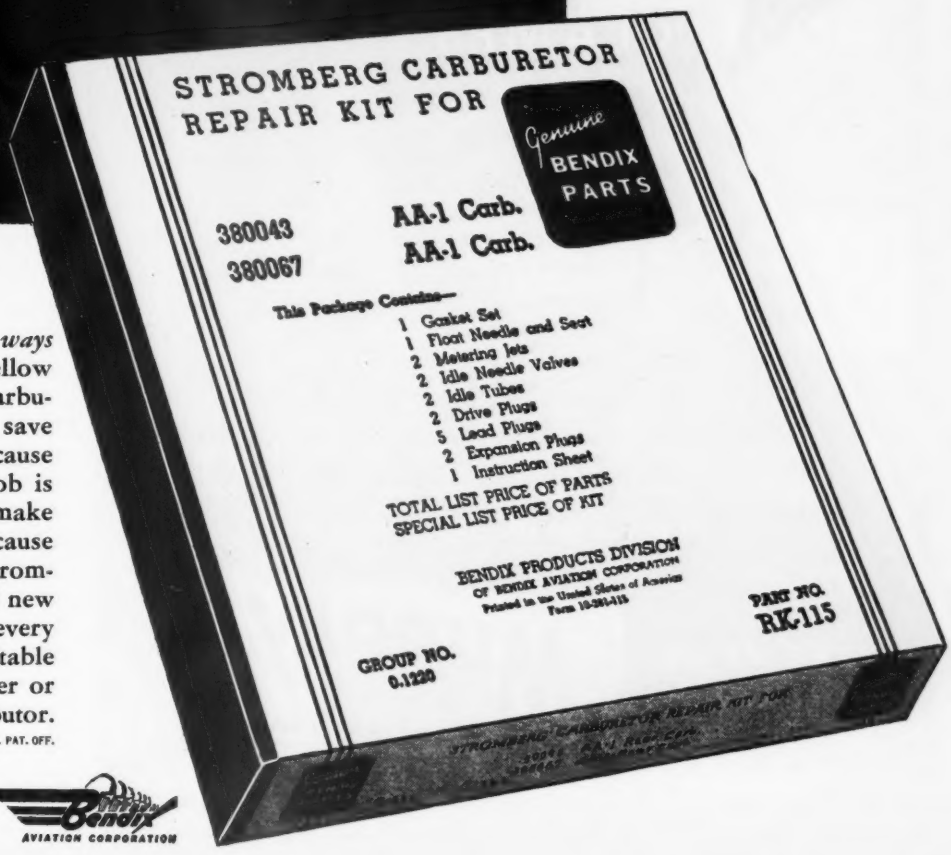
MONEY FOR CUSTOMERS

MAKES

MONEY FOR YOU

- Genuine Stromberg Parts
- Motor Tune-up Data
- Complete Repair Instructions
- Parts List

All in one Time-Saving Kit!



You'll get satisfaction *both ways* when you use this familiar yellow kit. Thorough Stromberg* carburetor repairs are easy—you save time, make more profit—because everything necessary for the job is combined in one package. You make a hit with the customer, too, because with genuine precision-made Stromberg parts, he gets economical new carburetor performance. Do every Stromberg job the easy, profitable *Stromberg* way—see your jobber or local Bendix-Stromberg distributor.

*REG. U. S. PAT. OFF.

BENDIX PRODUCTS DIVISION of
SOUTH BEND 20, INDIANA

Bendix
AVIATION CORPORATION

Legally Speaking • • • CONTINUED FROM PAGE 124

In other words, they wanted the court to relieve them of the legal effect of the deed.

In the course of its opinion the Supreme Court of Arkansas said:

"At most the testimony in this case merely showed that the parties made a mistake of law—that they did not understand the legal import of the language that they employed. This is not sufficient to entitle a party to reformation." *(Wilkins vs. Wilkins, 206 Southwestern Reporter 2nd series, 26).*

Value of Repairs

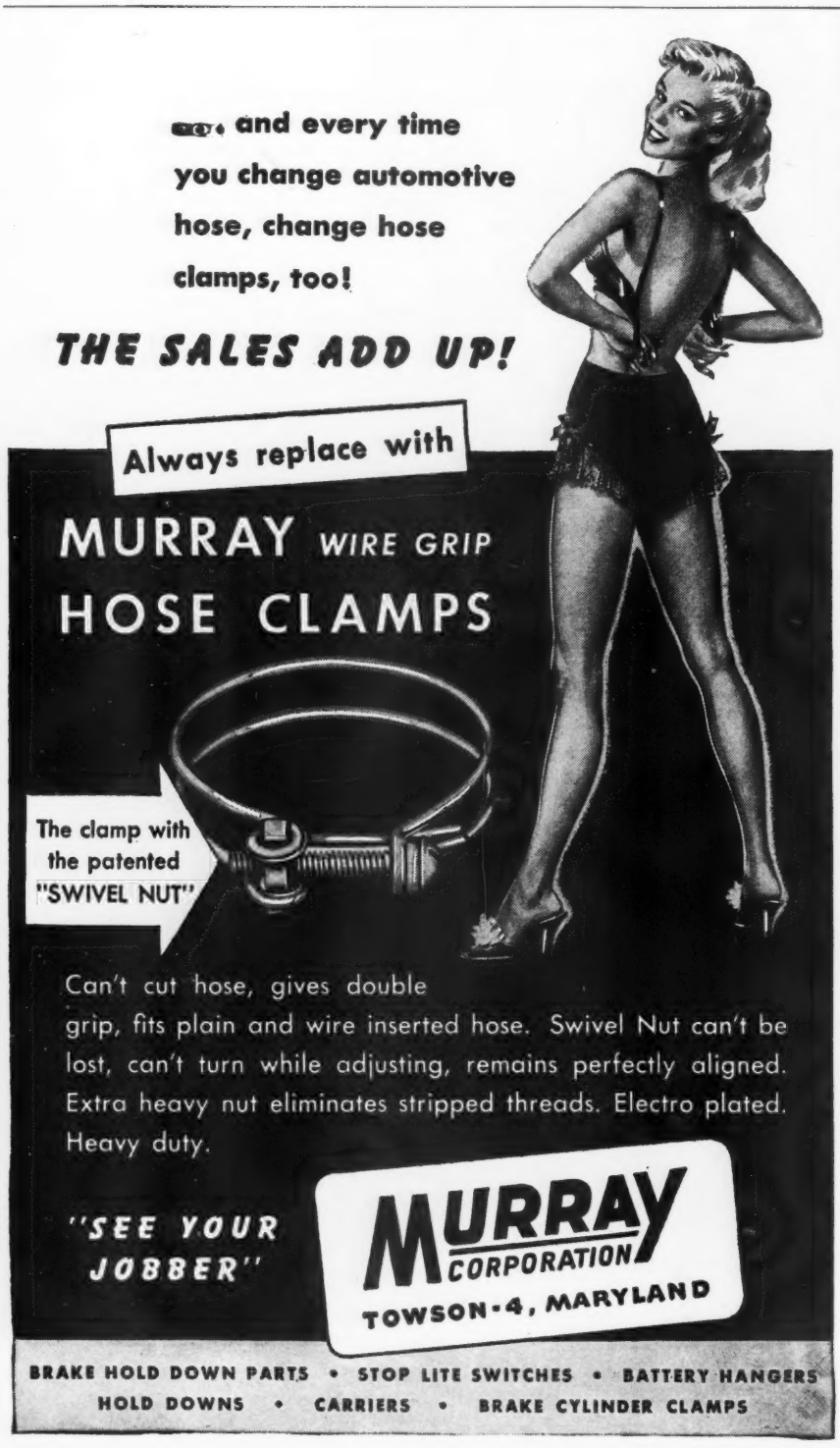
The cost of repairs to a car that has been in an accident has an important bearing not only on the value of the car, but on the other driver.

A Missouri court recently put it this way:

"A plaintiff suing for damage to his automobile is entitled to recover the reasonable expense incurred by him in repairing the car.

"If the required repairs increase the market value of the car beyond its value immediately before the accident, then that part of the cost of the repairs equal to the amount in value that the property has been enhanced beyond its reasonable market value immediately before the accident, should be deducted from the total amount of repairs, and whatever balance remains is recoverable.

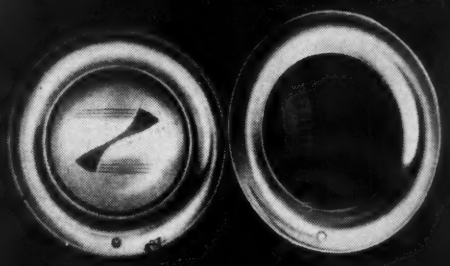
"Or, if after the repairs are made, the value of the car is not restored, the owner may recover, in addition to the cost of the repairs, an amount equal to the difference between the value of the car after the repairs and the reasonable market value immediately prior to the injury." *(General vs. Young, 206 Southwestern Reporter, 2nd series, 683).*



"Gosh, Miss Witherspoon, you just missed falling into the Canyon by an eyelash!"

DON'T DICTATE STYLE...
OFFER A CHOICE

Lyon



Exactly the same design as the Lyon Whitewall, but made of highly polished stainless steel. Three sizes for 16" wheels—two sizes for 15" wheels.

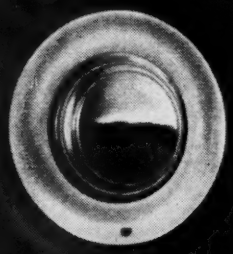
List price $11.95 per set of four.

The Smart New Wheelwall

DISTINCTIVE *Wheel* ACCESSORIES

★

IN WHITE OR STAINLESS STEEL



Now on over 4,000,000 cars—in a new improved design to accommodate wheel weights and absolutely prevent curb-scuffing.

List prices: Standard steel model (16" wheels) $6.95 per set of four. Deluxe steel model (15" and 16" wheels) $9.95 per set of four. Sets of five priced higher.

America's Favorite Whitewall

The New Deluxe Wheel Cover

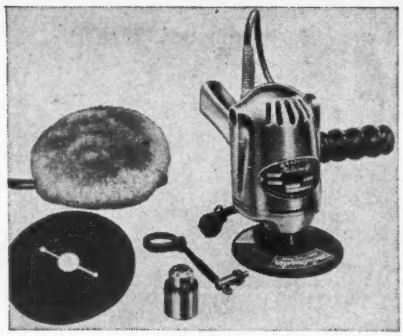
With the distinctive Lyon crest. Dresses the entire wheel in brilliant stainless steel. Designed to accommodate wheel weights. Two sizes fit all 15" and 16" wheels.

List price $19.95 per set of four.

All items shown are Fair Trade products sold under applicable Fair Trade Laws.

LYON INCORPORATED • 13881 W. CHICAGO BLVD. • DETROIT 28, MICHIGAN

L-18 Multi Purpose Tool



The "Triple Tool," a sander, polisher, drill, has been introduced by the Bradford Machine Tool Co., of Cincinnati, Ohio. Design is said to permit removing backing pad for sanding or polishing and substituting a 7b Jacobs chuck for drilling operations. Sanding discs and wood polishing bonnet are 5 inches in diameter. Use of liquid power polish is recommended. Net weight of the tool is six pounds, and the motor is a 115 volt AC-DC type, which drives the disc at 2300 rpm, free speed, and at 1400 rpm under normal load. The manufacturer states that ball bearings with sealed-in lubrication and hardened helical cut gears are used throughout. A cast aluminum housing encloses the entire unit.

For further information use coupon on page 72

L-19 Porta-Brella Accessory

Designed to assure the motorist of protection from the rain at all times, the Porta-Brella, manufactured by the Douglas-Murray Co., Allen Park, Mich., comes in a stainless steel case buffed to a satin finish. This case, the manufacturer states, fits in with the interior of the car, and is installed easily in a few minutes. The umbrella is available in gotham fabric or nylon, and decorated with a Lucite handle which seals the top of the umbrella case when it is not open.

For further information use coupon on page 72

New Lincoln-Mercury Plant Dedicated at Metuchen, N. J.

Lincoln-Mercury Division has officially dedicated its new assembly plant at Metuchen, N. J. which began operation March 15. Ceremonies formally opening the plant were held June 14. The plant site includes 77 acres and the one-story steel and concrete buildings have a floor area of about 585,000 sq. ft.

NEW! SOUTH BEND 14" Drill Press

South Bend presents this new 14" Drill Press as a companion to the South Bend Precision Lathe. It is built with the same high standards of accuracy and skilled workmanship. Years of painstaking research and experimentation have gone into its designing. This has resulted in a superior tool that is unsurpassed for accuracy, ease of operation, versatility and dependable performance.

$98.00 f.o.b. factory, bench model with chuck, extension cord and switch; less motor.

FEATURES and SPECIFICATIONS

BELT TENSION RELEASE. Quick-acting belt tension release lever simplifies speed changes. Keeps tension correct.

BUILT-IN LIGHT. Provides shielded illumination for work area. Separate on-off switch.

SPINDLE. Free-floating design prevents misalignment, side thrust and whip. Travel of spindle . . . . . 4"

BALL BEARINGS. Sealed type. No oiling. 2 on spindle drive unit, 2 on spindle.

QUILL BEARING ADJUSTMENT. Compensates for wear.

DEPTH GAUGE. Graduated in inches. Adjustable collars control feed and return.

RUGGEDLY CONSTRUCTED. Precision-built for industrial and all other types of shops.

TWO MODELS. Bench or floor type.

CAPACITY. Maximum drill size in iron or steel, ½". Drills to center of 14" circle.

CHUCK. Capacity . . . . . 0 to ½"

SPEEDS. Four . . . . . 707, 1305, 2345, 4322 r.p.m.

CHUCK TO BASE DISTANCE. Bench Model . 17"
Floor Model . . . . . 46½"

TABLE SIZE. Tilt Type . . . . . 10" x 10"

COLUMN. 2¾" diameter. Accurately ground.

HEIGHT. Bench Model, 35½" . . . Floor Model, 65½"

SHIPPING WEIGHT. Bench Model . . . . 195 lbs.
Floor Model . . . . . 235 lbs.

MOTOR REQUIRED. ⅓ h.p., 1725 r.p.m. Vertical mounting. On-off switch provided.

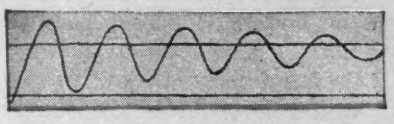
SOUTH BEND LATHE WORKS

BUILDING BETTER LATHES SINCE 1906 • 450 E. MADISON ST., SOUTH BEND 22, IND.

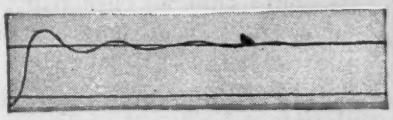
Dealers:
This message is appearing in current Fleet Publications to produce profit for you.

When a Man is "All In"

He Can't Go All Out for You



STANDARD TRUCK CUSHIONS — Poor take-up of shock followed by rough rebounds. Drivers take up to 50,000 shocks like this a day.



BOSTROM HYDRAULIC SEAT—Soaks up the initial shock and levels out—like a passenger car ride.

THESE ENGINEERING RIDE-GRAPHS tell you better than words why . . . Safety slips! Schedules lag! Equipment and cargoes take abuse!

Yes . . . Bostrom hydraulic seats more than pay for themselves by reducing driver fatigue. You get additional savings by cutting seat repair bills. Ask your dealer for a demonstration. For free folder, "12 Eye Openers Concerning Truck Seats" write:

There is NO Substitute for a Bostrom Ride!

BOSTROM

BOSTROM MFG. COMPANY
133 West Oregon Street • Milwaukee 4, Wisconsin

Bostrom Hydraulic Seats now standard or optional equipment on the following trucks: GMC, Diamond T, Federal, Hendrickson, Peterbuilt Walter, Ward La France, FWD, Dart, Oshkosh, and Coleman. Specify Bostrom Model 47 Seats on your new trucks.

inches of fluid from the chamber, using a pipette or burette. The remaining fluid will be at the level to which the head will have to be machined for 7.5 ratio.

Very carefully mark the head at the fluid level and machine to the marks.

To find out whether the valve will strike the head turn the crank till one of the valves is at the top of its lift. Using depth micrometers, measure from the top of that valve to the top of the block.

Measure the depth of the combustion chamber (in the head) just over the valve and add to that the depth of the thickness of the head gasket when compressed. Subtract the height of the valve reading from the combustion chamber plus gasket reading. The difference will be clearance for the valve head.

These methods seem involved but there is no way to short cut since machining tolerances at the factories, variations in castings, and so forth, make it necessary to do each job individually.

Chevrolet Reported Developing Torque Converter Transmission

Reports are current in Detroit that Chevrolet may offer an automatic transmission on its 1949 models as optional equipment. There is no official confirmation or denial from Chevrolet, however, although it is known that division has under study a torque converter very similar to the Dynaflow currently used by Buick. Problems of tooling for production in the volume that would be required by Chevrolet, even as an optional piece of equipment, would be a tremendous undertaking. There is little doubt that all cars will have some type of automatic transmission before too long, but the timing still is a matter of speculation.

Packard Forms New Division For Automatic Transmission

Packard Motor Car Co. has taken another step forward toward adoption of automatic transmissions for its cars The company has appointed E. G. Patzkowsky as manager of its newly established automatic transmission division. His initial duties will be to obtain the engineering release for the transmission, form an organization, provide new machinery, tool up and put the job into production. Last September, George Christopher, Packard president, announced that a new automatic transmission was under development but would not be put into production until "all bugs have been engineered out". The company has not revealed details of the transmission, but it is understood to be a torque converter type.

ENTHUSIASTIC ENDORSEMENT!

LEADING TIRE AND OIL COMPANIES RECOMMEND

THE NEW RIGIDIZED STAINLESS STEEL

COMET Skyshield*

Pat. No. 2,180,909

The Comet Skyshield is sold under the Aske Sales Policy which distributes exclusively through leading Tire and Oil companies and such other major outlets as meet the merchandising standards set by Aske Products, Inc., 1015 Fisher Bldg., Detroit 2, Michigan.

FOR EVERY TIRE DEALER AND GAS STATION!

When you place your first order for the new COMET Skyshield, rest assured you will be handling the most saleable visor on the market. That is the almost unanimous opinion of leading American merchandisers—your suppliers, the major Tire and Oil companies. These experts have thoroughly inspected, tested and heartily approved the new COMET Skyshield features because they adapt themselves so ideally to any size operation. With this visor, painting and hole-drilling have been entirely eliminated; you can complete the sale and install in a matter of minutes. A single adjustable size fits nearly every car on the market which simplifies ordering and stocking. And above all the price is right, and Fair Traded for healthy, consistent profits. Take the experienced word of these national distributors who have endorsed it that the COMET Skyshield is the visor American motorists have been waiting for. *Order now* from your tire or oil supplier.

$17.95 LIST

MANUFACTURED BY CHARLES PECKAT MANUFACTURING COMPANY DETROIT, MICH.—MAYWOOD, ILL.

*TRADEMARK

What's to stop you from getting the local reputation of having the best equipped repair shop in town?

Lack of capital needn't stand in your way, because with the help of the Automotive Equipment Plan, you don't need much capital to get going.

Start as small as you want. Add as you grow. And *grow*, you most certainly will, because the better your equipment the more business will come to you.

Consult your jobber today about the most important items. Get going.

If you don't know about A E P . . . ask your jobber.

AUTOMOTIVE EQUIPMENT TIME PAYMENT PLAN

COMMERCIAL CREDIT CORPORATION

A Subsidiary of Commercial Credit Company, Baltimore

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

The Mark of Quality

Standard for the industry

. . . Replace with *identical* Weatherhead parts . . . used as original equipment by America's leading automotive manufacturers.

ORIGINAL EQUIPMENT PARTS

Look Ahead with

THE **Weatherhead** CO.

CLEVELAND 8, OHIO

PLANTS AT CLEVELAND, OHIO • ANGOLA, INDIANA • COLUMBIA CITY, INDIANA • HOUMA, LOUISIANA • ST. THOMAS, ONTARIO, CANADA

EASY TO SELL
EASY TO INSTALL

DUREX
GASOLINE FILTER

HIGH IN EFFICIENCY
LOW IN PRICE

Durex—the filter that lets nothing but clean fuel pass through its porous metal filtering element—will pay for itself over and over. It traps water, and the tiniest particles of the lint, dirt, dust and scale that find their way into fuel tanks and lines.

Every driver of a motor vehicle—car, truck or bus—will admit the value of an efficient fuel filter—and the Durex is priced so low that sales are easy, once you show it and point out its revolutionary construction.

The Durex filter element, a product of powder metallurgy, is a mass of tiny metal spheres, firmly bonded under heat and pressure. Liquid fuel can travel through the maze of passages between the spheres—but no solid particles or lint can penetrate beyond the surface. Show this sturdy metal unit to your customers—let them feel it, inspect it; they'll realize that here is a filter that really filters.

Display, and *sell,* Durex gasoline filters . . . for quick profits in a huge market.

UNITED SERVICE MOTORS

Durex gasoline filters are distributed nationally by United Motors Service. Order from your distributor.

MORAINE PRODUCTS
DIVISION OF GENERAL MOTORS CORPORATION, DAYTON, OHIO

KELSEY-HAYES

POWER BRAKE EQUIPMENT with *Feather touch* Control

All the Brake You'll Ever Need!

You deserve the best "brake" there is! Kelsey-Hayes offers you just that . . . the superior combination of the famous Kelsey-Hayes "Vacdraulic" brake power unit with the nationally known Kelsey-Hayes "Lathan" control valves, power chambers, and vacuum reserve tanks.

Here's all the brake you'll ever need to safely equip every fleet, from the truck-tractor trailer "heavies" on down to meet every situation under any condition for all kinds of pay loads. The "Feather-touch" control gives the driver a perfect "brake-feel" . . . eliminates lag . . . assures fast, silky-smooth, safer stopping. An experienced Kelsey-Hayes power-brake engineer can show you conclusively why this superior equipment is your best bet!

Know How . . . ASSURES PROVEN PRODUCTS AT . . .

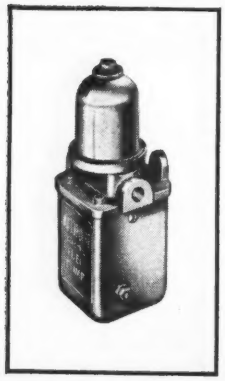
KELSEY-HAYES WHEEL COMPANY

DETROIT 32, MICHIGAN

Wheels—Hub and Drum Assemblies—Brakes—"Vacdraulic" Brake Power Units—for Passenger Cars, Trucks, Buses—made by Kelsey-Hayes' 4 Michigan Plants and Windsor-Canada Plant • "Magdraulic" Electric Brakes—"Lathan" Vacuum Power Brake Equipment for Tractor-Trailers—made by Kelsey-Hayes' South San Francisco-Lathan Plant. Wheels—Hubs—Axles—Parts for Farm Implements—made by Kelsey-Hayes' French & Hecht Plant at Davenport, Iowa.

WITHOUT AUTOPULSE

my stock wouldn't be complete

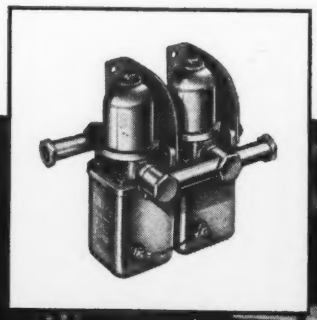


Nobody has to tell me this is no time to turn business away—especially fuel pump business which is profitable.

As long as I keep a stock of Autopulse Pumps on hand, I can supply every request regardless of what make it is, what model or whether it's an automobile, truck or bus. The Autopulse in single or multiple units serves every vehicle large or small—and I never miss a sale.

In addition to that, one Autopulse sale leads to another because Autopulse performance lives up to every claim.

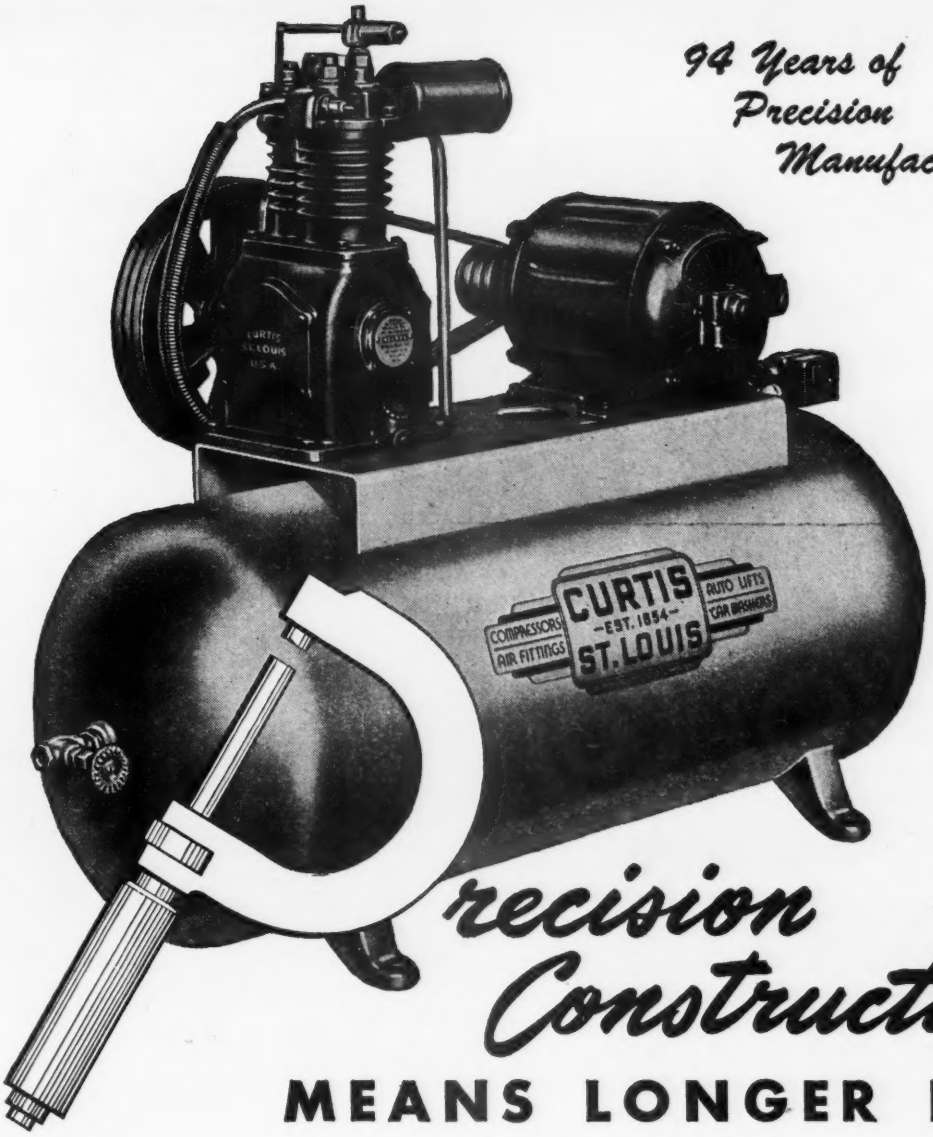
5021



AUTOPULSE *Corporation*

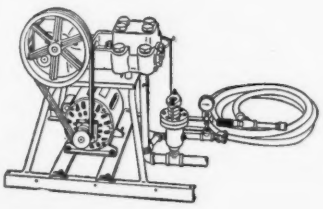
LUDINGTON, MICHIGAN

94 Years of Precision Manufacturing



Precision Construction

MEANS LONGER LIFE

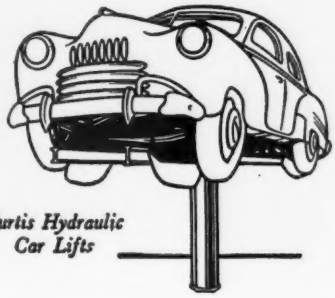


Curtis Hydraulic Car Washers

For Example:

- Timken Bearings
- Automatic Unloading Starter
- Dust-proof Enclosed Compressor
- Positive Lubrication
- Automatic Electric Welded Tank

Write for Bulletin C-6 on Curtis Air Compressors, Hydraulic Car Washers and Full Hydraulic Auto Lifts.



Curtis Hydraulic Car Lifts

CURTIS

PNEUMATIC MACHINERY DIVISION

of Curtis Manufacturing Company

1946 Kienlen Avenue St. Louis 20, Missouri

CURTIS PNEUMATIC MACHINERY DIVISION *of Curtis Manufacturing Company.* C-583-A
1946 Kienlen Avenue, St. Louis 20, Missouri

Please send me your Literature Kit C-6, which includes bulletins on Curtis Air Compressors, Curtis Auto Lifts and Curtis Car Washers.

Name.....

Firm.....

Street.....

City.....Zone.....State.....

buy your heaters from HEATER HEADQUARTERS

FOR FORD AND MERCURY CARS AND FORD TRUCKS (FM FORD)

This one model fits all three . . . helps cut down inventory. Easily installed on all latest models.

FOR GENERAL MOTORS CARS (GM-100A)

An eleven-segment motor gives greater performance for heating, defrosting and foot warming. Beautiful finish harmonizes with color scheme of dashboard.

FOR CHRYSLER MOTORS CARS (C-805)

The Super Power Heater is custom built like all the other E. A. heaters for easy installation in knockouts on the interior side of the dash in the latest Chrysler-built cars.

. . . you'll get a

BETTER HEATER

BETTER DEAL

BETTER PROFIT

E. A. Laboratories manufactures a full line of custom built heaters for easy installation in Ford, Chrysler, General Motors and other cars—so whatever make or model car you sell, E. A. has the right heater for you. The heaters shown here are three leaders.

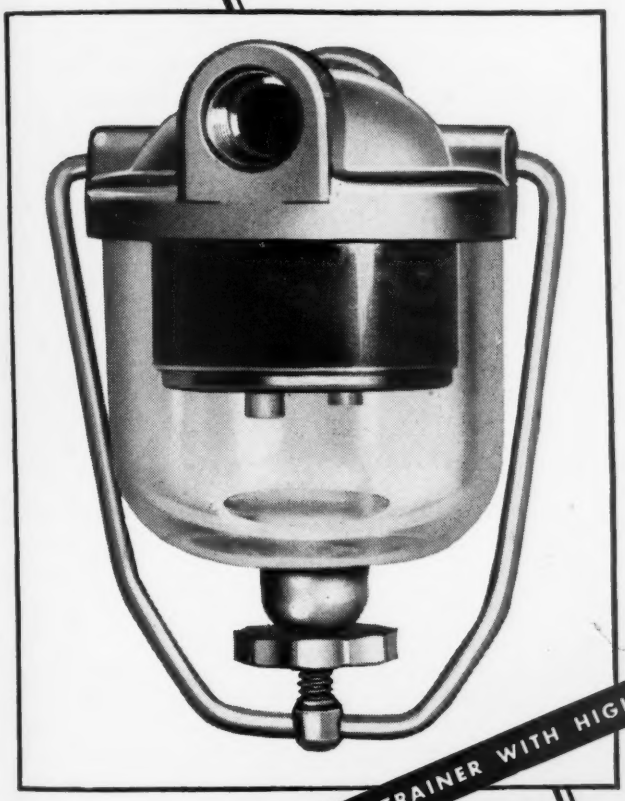
E. A. LABORATORIES, INC.

Brooklyn 5, New York

El Monte, California • Chicago, Illinois

Made by E. A.—the leader since 1904 in the automotive accessory field.

PERFORMANCE PROTECTION MOTORISTS NEED . . . PROFITS YOU CAN USE



Here is the only Gasoline Strainer with the high-efficiency "Fiberite" Element . . . 100% non-abrasive, waterproof, acidproof and rustproof. It enables you to sell real performance protection.

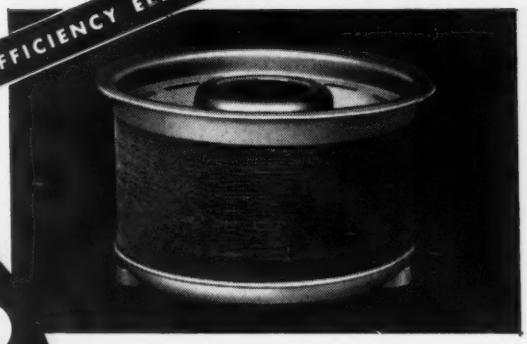
The AC Gasoline Strainer prevents engine failure. It keeps gasoline clean and so prolongs the life of carburetor jets, needle valves and valve seats. It filters out dirt, lint, abrasives and water. It preserves easy starting and peak carburetor performance. It is easily installed.

And here's how easily you can cover the market:

- **7 Complete Gasoline Strainer packages (containing all necessary fittings) cover all passenger car and light truck installations.**
- **1 Additional Strainer package (containing all but special fittings) covers all other engine installations.**

Sell this performance protection for extra profits. It has the added advantage of repeat business in Replacement Elements which are individually packaged for this purpose.

AC GASOLINE STRAINER WITH HIGH-EFFICIENCY ELEMENT



AC Gasoline STRAINERS

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

Revolutionary Development — PROFITABLE

FOR THE FIRST TIME -

5 colors **that beautifully match or harmonize with today's brilliant auto interiors — upholstering or seat covers.**

3 sizes **KAR-RUGS engineered to fit front and rear of any car.**

KEEPS NEW CARS LOOKING NEW ...
DRESSES UP OLD CARS

- Easy to Keep Floors Clean. Catches and holds dirt, mud, cinders, etc. Easy to remove. Shake out and replace clean.
- Keeps Feet Up Off Water and Mud — Prevents or covers unsightly worn spots.

COPYRIGHT 1948 — THE WOOSTER RUBBER CO.

Brings You Big, New *SALES OPPORTUNITY*

Rubbermaid KAR-RUGS*

REG. U. S. PAT OFF.

to Completely Equip Any Car

*
The original "throw-rug" for automobiles — made of new rubber compounds in rich colors to enhance the beauty of modern cars and protect floor materials from dirt and wear.

Here's a new auto accessory with real merchandising features. 30 million motorists will want them to protect and dress up new cars and old. There's nothing like them—it's sensational to offer these KAR-RUGS, made of new rubber compounds in beautiful, clear colors. The size range multiplies ordinary sales 5 times by completely equipping cars — front and rear.

Give them prominent display—show customers how they look in their cars—they sell themselves. And you're selling top quality with real utility and long life.

Start cashing in now! If your jobber is not yet stocked, send your first order direct to us. Jump the gun in your community. These new Rubbermaid KAR-RUGS are HOT!

THE WOOSTER RUBBER CO., WOOSTER, OHIO

Made by the world's largest manufacturer of Rubber Mats

***Rubbermaid*®**

★ NO RECLAIM — ALL NEW RUBBER

Resistant to Oil, Gasoline, Grease, Soap, Heat or Cold

• And Handy for Emergency Use

Protects Clothing When Kneeling to Change Tire

Placed under wheel for traction in snow or mud.

To: THE WOOSTER RUBBER COMPANY, DIVISION A, WOOSTER, OHIO

Please rush us the following Rubbermaid KAR-RUGS.

Each Color Packed 6 KAR-RUGS to a Carton

ITEM NUMBER	RETAIL EACH	BURGUNDY RED	ROYAL BLUE	FOREST GREEN	COCOA BROWN	MIDNIGHT BLACK
		No. of cartons	No. of cartons	No. of cartons	No. of cartons	No. of cartons
15-1452 (small) 16" x 18"	**$1.50** $9.00 per carton					
15-1455 (medium) 15" x 25"	**$1.95** $11.70 per carton					
15-1459 (large) 18" x 26"	**$2.50** $15.00 per carton					

DEALER DISCOUNT: 33⅓% less than 4 doz. 40% 4 doz. or more.
FREIGHT PREPAID

Company .....

Address..... City..... State.....

My Jobber is.....

the Show's the thing . . .

Cleverly and arrestingly designed in steel, produced in color combination of blue, yellow and red. Approximately 6" x 8", it is constructed for counter or wall use, packed in individual shipping cartons. No jobber or dealer should pass up this profit-making deal!

Item	Quantity
1AG2	10
SFE4	10
SFE6	10
SFE9	20
SFE14	30
SFE20	170
3AG30	30
SFE30	20
	300

ONLY FUSE FOR AUTOS—that combines in an exclusive design internal soldering and Littelfuse patented locked cap construction. This is your positive guarantee against mechanical failures. 100% inspection for electrical continuity. Major suppliers of circuit protection to the electronic industry for 20 years, Littelfuse now is supplying all the major automotive manufacturers.

ONLY AUTO FUSE DISPLAY—now available to jobbers and dealers for that vital point-of-sale responsibility. Auto Littelfuses will show up to your customer—a sure-fire fuse profit booster. The convenient way to handle, check and sell your stock.

ONLY FUSE COMPANY—to be a step ahead in providing full support of a high-powered merchandising program behind a complete fuse line with supporting items.

In the spotlight, this new automotive star! Here is that ideal combination of outstanding "actor" plus a superlative "show" and supporting "cast." The success of this Littelfuse "salesman" shown here to sell, is as sure as the dependability of Littelfuses. For the first time, Auto Littelfuses are displayed in keeping with the superiority of the product—a quality display for quality merchandise at strictly competitive prices. Littelfuses are available in the whole range of sizes necessary for servicing all cars, light trucks and car radios. Made to SAE specifications, the SFE fuse line is listed by Underwriters' Laboratories.

FUSE APPLICATION CHART—is only a part of a full quality merchandising program to complement a complete quality fuse line. The Auto Littelfuse Application Chart—included with each display—is greatly simplified and condensed. Price sheets are designed in proper color combination for quick information and promotion.

INTENSIVE PUBLICATION ADVERTISING—rounding out this potent promotion, an intensive and hard-hitting magazine advertising campaign has been released. Watch for it monthly.

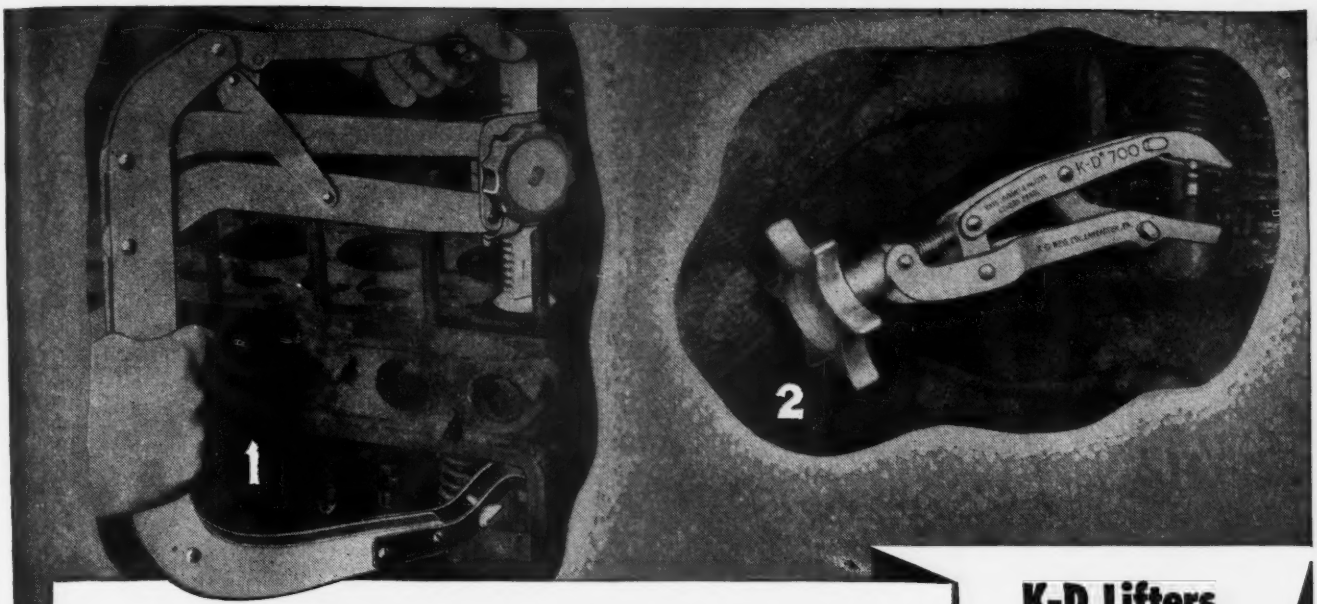
WHEN YOU'VE GOT THE QUALITY—the show's the thing to make new, steadily increasing profits and maintain your reputation for selling only the best. So write for new and complete details without delay.

FIRST IN CIRCUIT PROTECTION

LITTELFUSE *Incorporated*

4785 NORTH RAVENSWOOD CHICAGO 40, ILLINOIS

NITE-T-LITE • SWITCH-LITE • IGNITION FRITZ • NEON INDICATORS • SWITCHES • CIRCUIT BREAKERS • FUSES, MOUNTINGS & ACCESSORIES



SPEEDY VALVE SERVICE

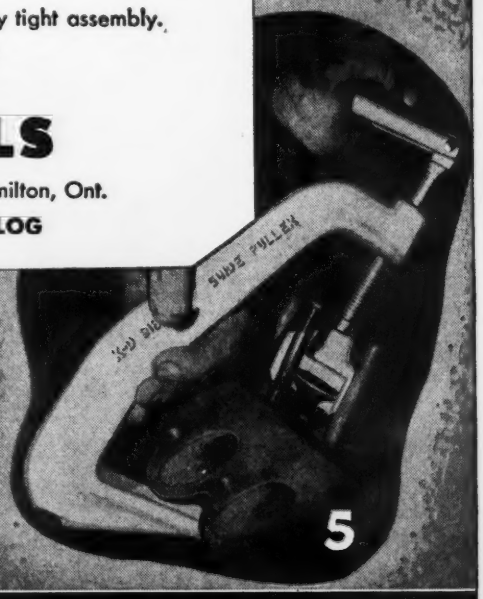
K-D Lifters at work!

1. Popular 380 Compressor. Ideal for motors old, new, both L- and valve in heads. Very fast!
2. New 700 Lifter. 8" long. For modern deep set motors, under fenders or manifolds. Quick!
3. 335 for Cadillac, LaSalle V-8's. One man operation. 335 and 336 Inserter make 337 set.
4. Old favorite 600 Lifter. Services nearly all L-heads, old or new. Strong, fast, dependable.
5. 918 Puller for Ford guides. Pulls any tight assembly. 917 Driver and 918 make 920 set.

K-D TOOLS

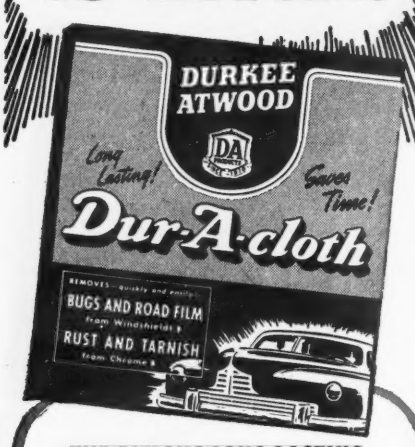
K-D MFG. CO., Lancaster, Pa., Hamilton, Ont.

WRITE FOR LATEST CATALOG



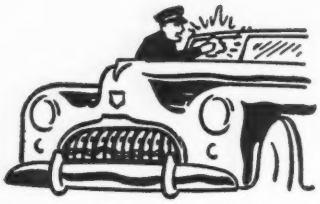
K-D TOOLS—at Jobbers everywhere

Dur-A-cloth IS BACK!



THE FAMOUS LONG LASTING TREATED CLOTH THAT REMOVES BUGS, RUST, TARNISH, STAINS

NOW AVAILABLE



Removes **bugs without dissolving them. Leaves windshields sparkling clean.**

Restores **chrome to new beauty. Takes off rust, stains, tarnish—quickly and safely.**

Ask your supplier or write direct.

DURKEE-ATWOOD

Dur-A-cloth

DURKEE-ATWOOD CO.
MINNEAPOLIS 13, MINNESOTA

More THAN A PACKAGE OF SHIM STOCK...

Here is shim stock in handy dispensing cartons, especially designed to save you time, waste and temper.

The desired amount of shim stock is pulled through the slot of the plainly marked carton and snipped . . . leaving the rest of the precision shim material in the carton, protected and instantly ready for use.

Available in 6 x 100 inch rolls of brass or steel in gauges from .001 to .012 (.015, .020, .025 and .032 packed flat in envelopes, 6 x 25 inches). No miking . . . the gauges are plainly marked on the containers.

Consult your automotive or industrial distributor.

3031

LAMINATED SHIM COMPANY
INCORPORATED
GLENBROOK, CONNECTICUT

Frederick G. Wacker Charter Member of MEMA

Frederick G. Wacker, Sr., prominent in the automotive equipment industry for over a quarter of a century, and president of Ammco Tools, Inc., of North Chicago, Ill., died recently.

He had been active as a Charter Member of the Motor Equipment Manufacturers Association and was its president during the years 1936, 1938 and 1947. He had been president of his own company for the past 26 years.

A graduate of the University School in Chicago, Mr. Wacker attended Yale University, graduating in 1910. As an ardent sailing enthusiast, he was a member of the Chicago Yacht Club and the Lake Geneva Yacht Club. He was also a member of Onwentsia and Shore-Acres Country Clubs and the Racquet Club.

Brockway Elected Thermoid Vice-President by Board

Election of Carl Brockway by the Board of Directors to a Vice-Presidency of Thermoid Company was announced recently. Prior to his becoming associated with Thermoid in 1941, Brockway was President and General Manager of Worldbestos Corporation. In his new capacity, he will be responsible for all production of brake lining, clutch facings and other friction materials.

Robertson Named Sales Head of Van Auken Co.

The appointment of George A. Robertson as General Sales and Advertising Manager of Van Auken Company, Detroit, Michigan, makers of Van Auken Grille Guards, has been announced by R. J. Quinn, General Manager.

Yes, she'll have stars in her eyes

TAKE the lady at the wheel as representative of Buick owners . . .

She slips into the driver's seat, presses the treadle—and the quick answer of Fireball power warms the cockles of her heart.

She feels out this beauty in traffic—and marvels that a two-ton car can have such an easy light-footedness.

She finds a rough spot: cobbles, maybe, or a tangle of car tracks. And she fairly floats over it with never a bobble or bounce.

She tries a hill—a straight stretch—a crowded city street. Her big and beautiful Buick takes them all in easy, effortless stride!

So she begins to wonder—where's *anything* to touch this one? Where's any car that wraps up so much starry-eyed happiness in a simple, tidy, eye-filling package?

Is it *style* she likes? Well, a look about tells her nothing even comes close to this standout lovely.

Power? She knows Buick alone has the powder-quick liveliness of Fireball combustion.

Smoothness and *quiet?* Here, Hi-Poised mountings wipe out engine sensation; here, Sound-Sorber top lining silences every mile.

Room and size? This two-ton honey has three-person seats. The soft ride of low-pressure tires? Buick's are extra big, are mounted on the widest rims in the industry, and have the gentleness of all-coil springing to boot.

And if she wants the very last word in silky driving ease, *only Buick gives her Dynaflow Drive.** Only in Buick, of all American cars, does she move swiftly and smoothly *without a gear ever shifting!*

All of which explains why Buick owners have stars in their eyes—and why Buick so definitely is America's most wanted automobile.

**Optional at extra cost on Roadmaster models only.*

BUICK DIVISION OF GENERAL MOTORS

Tune in HENRY J. TAYLOR, Mutual Network, Mondays and Fridays

When better automobiles are built
BUICK
will build them

BUICK alone has all these features

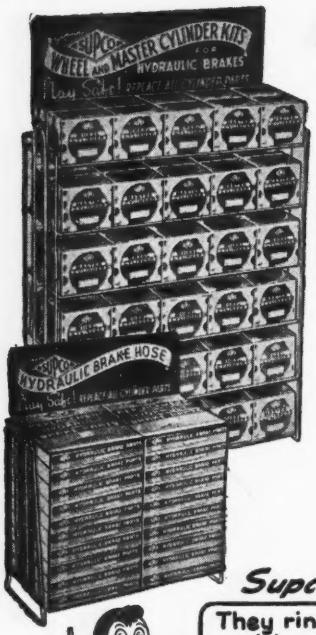
★ DYNAFLOW DRIVE *(Optional, Roadmaster Series)*
★ TAPER-THRU STYLING *(Super and Roadmaster)*
★ VIBRA-SHIELDED RIDE ★ SAFETY-RIDE RIMS
★ HI-POISED FIREBALL POWER
★ ROAD-RITE BALANCE ★ RIGID TORQUE-TUBE
★ QUADRUFLEX COIL SPRINGING
★ SOUND-SORBER TOP LINING *(Super and Roadmaster)*
★ DUOMATIC SPARK ADVANCE ★ FLEX-FIT OIL RINGS
★ TEN SMART MODELS ★ BODY BY FISHER

Help America Produce For Peace—Turn In Your Scrap Iron And Steel

White sidewall tires, as illustrated, available at extra cost.

NEW SUPCO ASSORTMENTS

Designed for YOU



THESE recent additions to the Supco line of assortments furnish an excellent example of our policy to provide the trade with assortments that will give the greatest possible coverage and the largest proportion of popular numbers, at a minimum outlay.

When you add these assortments to your stock you are in a position to render service to two important and very profitable branches of brake overhaul.

HDA 555—Contains 60 wheel and master cylinder kits (25 types). Substantial steel-frame merchandiser with attractive two-color display sign.

HDA 565—Contains 20 assorted Hydraulic Brake Hose in steel-frame merchandiser as above.

The above assortments cover 95% of all cars and trucks on the road today.

If your jobber cannot supply you write us.

Supco Sam Says!

They ring the bell—and I mean CASH REGISTER bell.

SUPCO PRODUCTS, CORP.
123 W. 64th St., New York, N. Y.

The Quality Line

SUPCO TRADE MARK REGISTERED

BRAKE PARTS · BRAKE FLUID · BRAKE CABLES · BRAKE TOOLS

"PERFECT"

GASKET ASSORTMENTS EXHAUST PIPE FLANGE

HERE are two assortments of gaskets for exhaust pipe flanges you'll welcome with open arms.

Put these two profit builders in your stock room and be ready to service any car or truck.

The Collar Type flange is packed in an attractive display carton containing 72 gaskets.

Bolt Hole Type assortment contains 150 gaskets, each size separately packed and marked for easy selection.

See your jobber or write us.

PERFECT PARTS, Inc.
55 Amsterdam Avenue, New York, N. Y.

Heat Conducting Glass

CONTINUED FROM PAGE 52

windshield completely coated with ice and driving at 50 miles an hour, Geiser noted that the windshield was completely deiced in "less than five minutes."

The principle behind the development was to heat glass by a continuous electric current. To accomplish this the research men tried various coatings and finally determined upon a composition that is basically stannic oxide and is formed with any number of tin compounds.

Increased reflection common to stannic oxide was minimized by avoiding thicknesses of odd quarter wave length multiples and maintaining thicknesses of even quarter multiples.

Electric current is fed to the film-coated surface through electrodes sandwiched between two pieces of ordinary glass. Only the inner surface of the exposed glass is coated with the conducting film, it too being in contact with the electrode. A controlled electrical current flows freely through the film, and spreads evenly over the entire surface with no resulting "blind spots." Neither the current nor the electrode has any damaging effect on the plastic layer used in laminated glass.

Classified Advertisements

IGNITION TESTERS: coil-condenser, attractive instruments. Regular $42.50, close-out $12.95. Moneyback guarantee. Box 21, Motor Age, 5601 Chestnut Street, Philadelphia 39, Pa.

SALESMEN WANTED — LUCRATIVE, PERMANENT OPENINGS IN SEVERAL TERRITORIES FOR ADDITIONAL EXPERIENCED SALESMEN. RADIATOR SPECIALTY COMPANY, MAKERS OF SOLDER SEAL PRODUCTS, CHARLOTTE, N. C.

Filling station, garage, modern home, all new, 2 acres land, in community trading center and rich farming country. On U. S. Highway 12 near 4 lakes. Owner ill. Wonderful spot for farm machinery and garage. Price $25,000.00. Morrissy & Gilbert, Elkhorn, Wisconsin.

Amazing Carlie Cream, with lanolin, whisks paint and lacquer from hands. No harsh solvents—no grit. Leaves hands soft, smooth. 8 oz. jar $1.00 postpaid. Carlie, 6651 Washington, University City 5, Mo.

AUTOMOTIVE engine rebuilding and repair shop. Best equipment. Parts jobber. Doing good business. Excellent opportunity for A-1 mechanic. Fast growing town. Illness is reason for selling. Harry Marshall, Realtor, 106 N. Cortez, Prescott, Arizona.

NOW! for as little as $368.00

A Full Powered All-Purpose Extra Heavy-Duty

HYPRESSURE JENNY STEAM CLEANER

To help you get More Business Make More Profits Save Time... Labor... Expense

HYPRESSURE Jenny STEAM CLEANER

Hypressure Jenny, conceded to be the finest steam cleaner, can now be had for as little as $368.00. Easily one of your most profitable pieces of equipment, Hypressure Jenny pays for itself four or more times a year cleaning motors, radiators, grille work, chassis and parts 8 to 10 times faster, and better than possible by hand methods. Cleaning before repairs saves up to 40% of your mechanics' time; reveals worn or damaged parts you can replace at extra profit. Grease racks, pits, lifts, runways, walls, floors and windows, cleaned by Hypressure Jenny, present that neat, well-kept look that keeps customers coming back again and again. They're safer, too!

HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING CO.

"Serving Since 1892"

P. O. BOX 95 CORAOPOLIS, PA.

Let us show you how much Hypressure Jenny can increase your profits. Fill in and MAIL the coupon today. No obligation.

REQUEST FOR SURVEY

We employ ..... mechanics on equipment repair work.

We overhaul or recondition ..... pieces of ☐ machinery, ☐ trucks or buses, ☐ used cars each month.

We paint ..... cars, ... trucks, ... miscellaneous equipment monthly.

We wash approximately ..... cars, trucks or buses monthly.

We're interested in cleaning ☐ floors, ☐ walls, ☐ windows, ...

.....

Based on above facts, please show us the savings or extra profit HYPRESSURE JENNY can produce.

Company .....

By .....

Title .....

Address .....

City ..... State .....

(Answer only those questions that apply in your case)

RECOMMEND

Titeflex

ALL-METAL

Fuel Lines

Nothing annoys the average motorist more than to have a gas or oil line fail—especially when he is miles from help. You can insure *your* customers against this particular misfortune if you replace their worn-out gas and oil lines with **TITEFLEX.** For **TITEFLEX** lines are ALL metal and cannot rot, or deteriorate in any way. They never seem to grow old.

TITEFLEX automotive lines are packaged in Pliofilm for extra protection. Write today for our automotive catalog and prices.

Titeflex, Inc. 506 Frelinghuysen Ave., Newark 5, N. J.

Titeflex

FUEL LINES

Never let you down

Wholesalers Financial Statements

CONTINUED FROM PAGE 53

Net Profit figure is not a uniform one because of inconsistencies by jobbers in making re-

Mr. T. I. Evans, Comptroller of MEMA, made the compilations in this Survey.

COMPOSITE STATEMENT OF 411 AUTOMOTIVE JOBBERS

ASSETS	12/31/46	12/31/47	Increase or Decrease Over 1946
Cash	$ 16,752	$ 15,530	—$ 1,222
Receivable	23,423	25,748	+ 2,325
Inventory	51,065	62,614	+ 11,549
Current Assets	$ 91,240	$103,892	+$ 12,652
Fixed Assets	25,314	28,665	+ 3,351
Total	$116,554	$132,557	+$ 16,003
LIABILITIES			
Current Liabilities	$ 33,015	$ 33,357	+$ 342
Long Term Indebtedness	3,037	4,750	+ 1,713
Net Worth	80,502	94,450	+ 13,948
Total	$116,554	$132,557	+$ 16,003
Working Capital	$ 58,225	$ 70,535	+$ 12,310
TRADING OPERATIONS			
Sales	$303,586	$326,093	+$ 22,507
Cost of Sales	218,688	236,508	+ 17,820
Gross Profit	84,898	89,585	+ 4,687
Net Profit	16,850	14,832	— 2,018
Current Ratio	2.8	3.0	
Increase in Sales volume over 1946		7.4%	
Gross Profit on Sales	28.0%	27.5%	
Net Profit on Sales	5.6%	4.5%	
Inventory Turnover	4.3 times	3.8 times	
Collection Period	28 days	28 days	
Net Profit on Net Worth		18.4%	
Increase in Net Worth over 1946		17.3%	
Ratio of Net Worth to Total Indebtedness	2.2	2.5	

B U Y B O N D S

LYNN *Lightning* TERMINAL SERVICE KIT

Handy - Convenient Complete

The Ideal Kit for
Automotive Mechanics
Electrical Repairmen
Maintenance Men
Garage Owners
Fleet Operators
Service Shops

READY TO USE!

Here in one handy and compact unit is a complete assortment of the most popular LYNN Lightning Terminals and Insulation Tubing together with the LYNN Crimping Tool. This kit will take care of most of your terminal needs.

The clear, plastic box is fitted with 11 compartments, one for the tool and 10 for terminals and insulation tubing. Only the most popular numbers are included.

If your jobber cannot supply you write us for complete details and new illustrated catalog.

LYNN PRODUCTS COMPANY, Inc. 319 East Ontario Street, CHICAGO 11, ILL.

HIS *ONLY* JOB IS TO SERVE YOU...

The reputation of your McQuay-Norris wholesaler for interested personal cooperation is nationwide. Well stocked, with a complete line of parts, he offers economical, One-Stop service. Play ball with him and profit.

...and he sells

LEAK-PROOF PISTON RINGS

REG. U.S. PAT. OFF.

GUARANTEED

TO DO *ALL FOUR*

1 Keep oil down
2 Keep power up
3 Give smooth, new motor operation
4 Give longer life

TIME TESTED McQUAY NORRIS AUTO PARTS PROVEN IN SERVICE

A FAMOUS PRODUCT OF McQUAY-NORRIS MANUFACTURING CO. ST. LOUIS 10, MO. U.S.A.

1 bottle does 2 jobs
1. Cleans clogged radiators
2. Prevents further rusting
SOLD ON A MONEY BACK GUARANTEE SINCE 1931

GOLD SEAL
Radiator Sealer
Seals Leaky Radiators
Split Water Jackets
Cracked Heads—
IN 3 TO 5 MINUTES

GARRY LABORATORIES, Inc.
BUFFALO 7, N. Y.

A.S.I. Space Drawings Set For June 30-July 1

Applications from manufacturers for exhibit space at the 1948 Automotive Service Industries Show are coming in at a high rate, it is reported by A. B. Coffman, show manager for the big event. This year's show will be held December 6-10, and the location will again be Navy Pier, Chicago.

Official announcement of the show giving complete details, rules and regulations, space applications in duplicate and necessary order blanks have been mailed to all member manufacturers by first class mail, special delivery. An acknowledgment post card, to be filled out and mailed on receipt of the announcement, was attached to the enclosing letter. Coffman especially urged that any member manufacturer who has not yet received his application, should contact him at 111 West Jackson Blvd., Chicago 4, Ill., and a duplicate will be sent.

WEDNESDAY, June 30th

1st Drawing—Firms having exhibited 12 years or more.

2nd Drawing—Firms having exhibited 10 or 11 years.

3rd Drawing—Firms having exhibited 7, 8 or 9 years.

4th Drawing—Firms having exhibited 5 or 6 years.

THURSDAY, July 1st

5th Drawing—Firms having exhibited 3 or 4 years.

6th Drawing—Firms having exhibited 1 or 2 years.

7th Drawing—Firms exhibiting for the first time—and firms whose space applications reach the Show Mgr. after deadline date (June 1st).

DeVILBISS
Spray-Painting Equipment — Spray Booths — Exhaust Fans — Air Compressors — Hose and Hose Connections — Oil Guns.
See your authorized DeVilbiss distributor
THE DeVILBISS COMPANY
Toledo 1, Ohio

Since 1897
UNITED STATES ELECTRICAL TOOLS
have never swerved from their original standards of QUALITY AND SERVICE
THE UNITED STATES ELECTRICAL TOOL CO.
CINCINNATI, OHIO

DUNK 'EM IN GUNK H-S
COMPLETE DECARBONIZING PROCESS IN PACKAGE FORM
IMMEDIATE DELIVERY
1 GALLON OR A TANK CAR
CURRAN CORP. LAWRENCE, MASS.

The VAN LINE NEW WATER PUMPS
● Announcing a complete line of 28 NEW Water Pumps, duplicating original equipment, for all popular cars.
VAN Parts are sold thru leading Jobbers. If your Jobber can't supply you, write and give us his name.
VAN BERGEN & GREENER, INC.
1619 N. Hoyne Ave., Chicago 47, Ill.
356 Venable N. W. ATLANTA | 2727 Oak St. KANSAS CITY | 2306 N. 15th St. PHILADELPHIA

WORLD WIDE
Genuine WELLS Ignition
USE PROVED IGNITION PARTS
QUALITY TELLS
Demand WELLS
WELLS MFG. CORPORATION
FOND DU LAC, WIS.

Cartoon courtesy of Ladies' Home Journal

Styles change . . . cars change. So do merchandising methods.

The latest is the Visual Front . . . the storefront that cuts out "gingerbread" . . . presents a sweeping, unobstructed view of the cars you want to sell.

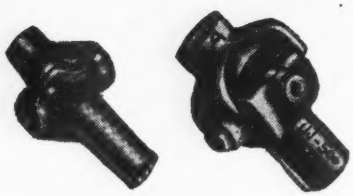
The above cartoon from an advertisement by a leading women's magazine is recognition that today's feminine buyers expect your showroom to be as up to date as the cars you sell. You can bet their husbands expect it, too.

Get ready for competition with a Visual Front. For information on this powerful display idea . . . and on the types of glass that make it possible, write to Libbey·Owens·Ford Glass Company, 5468 Nicholas Building, Toledo 3, Ohio.

VISUAL FRONT

LIBBEY·OWENS·FORD
a Great Name in **GLASS**

Complete UNIVERSAL JOINTS



Here are the Universal Joints that your customers will want to carry. Write today for complete information about the AMKO Line . . . the leader in the replacement field.

AVAILABLE NOW—For Chevrolet 33-36 Std.; 1934-36 Master; 37-39 and 40-47; for Ford 32-48; for Plymouth 34-47.

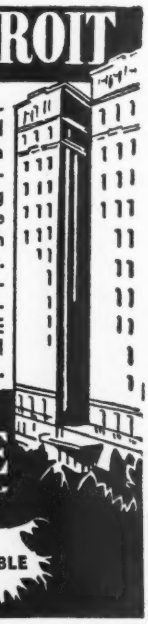
Also a complete line of Journal Assemblies. Write for circular.

At all Good Jobbers—Mfd. & Dist. by

AUTOMOTIVE MAN'F'G CO., INC.
570 W. FULTON ST. CHICAGO 6, ILL.

When in DETROIT

Stop at Hotel Wolverine. Centrally located on Elizabeth Street, a block east of Woodward, overlooking Grand Circus Park. Five hundred rooms, each with tub and shower. Good food. Ample parking space—garage service. Home of THE TROPICS, most unusual night spot in Detroit.



HOTEL
WOLVERINE
"The Goodwill Hotel"

RATES FROM
$2.75 SINGLE • $4 DOUBLE

FOR AUTOMOTIVE PARTS AND SUPPLIES . . .

Your NAPA Jobber is a Good Man to Know!

NAPA
Is the Largest
Independent Organization
In the Parts Industry

NAPA
Assurance of Quality

MEWA Directors Hold Election of Officers

CONTINUED FROM PAGE 54

ers, Tacoma, Washington succeeds Clifton E. Hamlin of C. E. Hamlin Company, Jackson, Michigan as Secretary.

Ralph L. Krohn of Genesee Supply Co., Utica, New York succeeds Howard S. Walters, Walters Distributing Company, Mineola, L. I., New York as Treasurer.

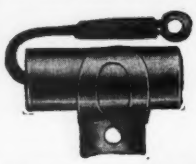
The following men were elected to the MEWA Board for a term of three years to succeed retiring directors: Floyd C. McLean, McLean Auto Supply Co., Laurinburg, North Carolina; William D. Myers, Jr., Myers Motor Supply Co., Joplin, Missouri; Warren T. Ruddell, The Central Rubber & Supply Co., Indianapolis, Indiana; and Harold U. Zerbe, E. S. Youse Co., Reading, Pennsylvania.

Glenn Appointed Manager By Worthington Pump

John O. Glenn, formerly Assistant Manager, Merchandising Division, has been appointed Manager of Pump and Compressor Merchandising Sales by Worthington Pump and Machinery Corporation, Harrison, New Jersey.

Glenn joined the Worthington organization in 1922 and was associated with the Corporation's Philadelphia Sales Office. He was appointed Assistant Manager of Worthington's Merchandising Division in 1940.

Shurhit
Triple Seal Moisture-Proof
CONDENSERS



Ask your Shurhit jobber or write us for details on these super-quality replacement parts. Complete Shurhit line includes Condensers, Contact Points, Rotors, Caps, Coils, Brushes, Cut-Outs, Switches, and Spark Plugs.

SHURHIT PRODUCTS, INC.
Waukegan, Ill.

Gear Pullers
GARAGE TOOLS

CARBON SCRAPER
CREEPER CASTERS
BUSHING REMOVERS
REAMERS

Cal-Van
MACHINE PRODUCTS INC.
★ Write for Catalog
300 WATER ST. JACKSON, MICH. U.S.A.

THE ANDREWS LINE . . .
Your Best Electrical Connection
CUSTOMER SATISFACTION SINCE 1921

Andrews
MANUFACTURING CO
ST. LOUIS, MO.

CAMPBELL
Lug-Reinforced
TIRE CHAINS
THE CHAIN WITH THE SAW TOOTH GRIP

U.S. Pat. No. 2,093,547 — Canadian Pat. No. 223,568
INTERNATIONAL CHAIN & MFG. COMPANY
YORK, PENNSYLVANIA

FLARES
FOG LAMPS
REFLECTORS
STOP LIGHTS
MARKER LIGHTS
CLEARANCE LIGHTS
DIRECTIONAL SIGNALS
SEALED BEAM CONVERSION KITS

ARROW SAFETY DEVICE CO.
MOUNT HOLLY, N. J.

WOLF'S HEAD IS 3 STEPS AHEAD
WOLF'S HEAD
MOTOR OIL AND LUBES
100% PURE PENNSYLVANIA
P.G.C.O.A. Permit No. 6

(Advertisement)

Why "Stepping Down" is so important

Hudson amazes motor-car world by using vital "step-down" zone — not available in any other car — to create riding qualities and safety beyond anything known before!

Word's going 'round—and fast, too—that the sensational Hudson, the only car you step down into, gives a "sweet," smooth, safe ride that is a new high mark in motor-car performance!

Perhaps you've heard pleased and proud Hudson owners talking about this exciting new motoring experience, but here's something you may have missed hearing:

The key to this amazing new ride lies in that area just under the floor of the average car, which in the New Hudson becomes the "step-down" zone—as illustrated in the sketches at right.

This "step-down" zone is all-important, because experience has shown that the *lower to the ground* a car can be built, the better it will handle, the more stability it will have, the safer it will be, and thus the more enjoyable and comfortable will be the ride.

Hudson, and Hudson alone, has accomplished a near miracle of low-built streamlining and smooth, safe, comfortable riding with an ingenious foundation frame and "step-down" zone. This new type of base frame surrounds the passenger compartment, and thus permits the floor to be lowered *down* within it. Recessing the floor creates the "step-down" zone and a center of gravity that is the *lowest in any American stock car*—yet road clearance is ample!

That's why Hudson has a hug-the-road way of going, even in cross-winds, and on every conceivable kind of highway. *When people see how this car takes even the sharpest curves, it spoils them for any other type of automobile!* They sense this delightful conformity to the road the minute they begin to ride; and this stability, plus the protection of riding encircled by a sturdy box-section steel frame, gives a grand feeling of *safe well-being.*

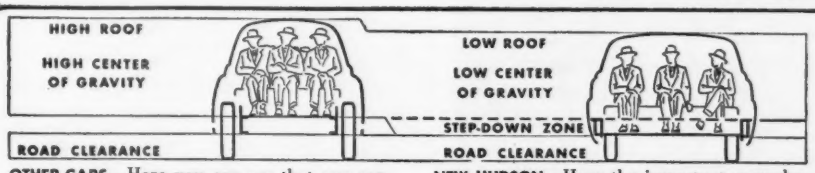
Then, out in the open spaces, the rest of the story unfolds.

Sitting in this car is as downright satisfying as stretching out in a favorite easy chair. Passengers ride on seats that are lowered and cradled ahead of the rear wheels, and even with its low silhouette, this breathtakingly beautiful motor car gives *more head room* than any other mass-produced car built today! Hudson's remarkable roadability and comfort bring them to the end of the longest trips pleasantly relaxed.

Hudson's use of the vital "step-down" zone in its exclusive, all steel Monobilt body-and-frame* is a development that required years of engineering work, the perfection of new production techniques, and millions of dollars in highly specialized *new* plant investment. Perhaps this explains why Hudson alone offers this new design principle today.

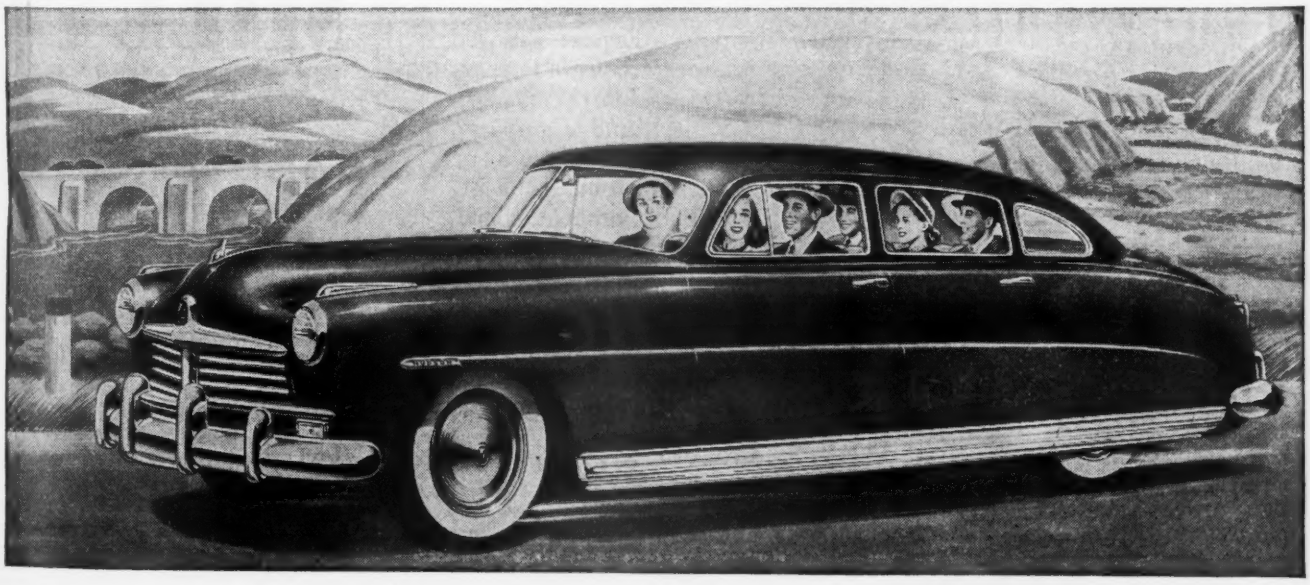
Interest in Hudson is at a new high level. Thousands of people are visiting the 3,000 dealers in Hudson's nationwide organization each day to learn how "stepping down" brings them advantages they have never known before!

*Trade-mark and patents pending



OTHER CARS—Here you can see that any car with floor on top of the frame, as shown above, fails to utilize the important space between frame members (heretofore wasted by placing floor on top of the frame). This results in a high center of gravity, and either a high roof or insufficient head room.

NEW HUDSON—Here the important space between frame members, shown above, becomes the "step-down" zone—a highly useful addition to interior roominess that creates a new, lower center of gravity, which in turn permits greater safety, improved roadability and ride, a low, streamlined silhouette.



Eight body styles in Super Series, and Commodore Custom Series, with luxuriously panelled, beautifully fitted interiors. Your choice, 121 h.p. all-new Super-Six or 128 h.p. masterful Super-Eight engine. Super-Cushion tires. Ten rich body colors. Two special colors or five two-tone combinations—white sidewall tires—at extra cost.

This time it's Hudson

THE COMPLETE LINE
that
Completely Satisfies
Since 1906
The
Fitzgerald Mfg. Co.
Torrington, Connecticut

Fitzgerald
GASKETS

You Can Rely On
FRENCHTOWN
INSULATORS
Used by more spark plug manufacturers than any other.
FRENCHTOWN PORCELAIN CO.
81 Muirhead Ave., Trenton, N. J.
(Factory: Frenchtown, N. J.)

THE NEW Hyland HONE
Saves Time · Low Price · Guaranteed

No. 10 — $3.90
¼" to 1"
No. 20 — $3.90
1" to 1½"
No. 30 — $4.15
1½" to 2"
No. 50 Set Services Brake Cylinders ¾" to 2" $11.95
HYLAND MANUFACTURING COMPANY
818 JOHN STREET PORTSMOUTH, OHIO

·TRUCK COILS·
by
Mallory
Universal installation features—more energy, easier starting, water-proof and age-proof.
6 Volt . . . $10.00 12 Volt . . . $12.50
Condensers $2.00
MALLORY ELECTRIC CORP.
DETROIT 4, MICH.

. . . For Faster and More Accurate BATTERY TESTING
IMPERIAL "K"
No. 515-T
BATTERY HYDROMETER
★ Thermometer Type
★ Shatterproof Glass Jar
ORDER FROM YOUR JOBBER
THE IMPERIAL BRASS MFG. CO.
1217 W. Harrison St. Chicago 7, Ill.

North Carolina Dealers

CONTINUED FROM PAGE 55

tion in continued efforts to eliminate accidents on the highways.

Ochsenreiter, the new president, served as vice-president during the past year and succeeds Allan Mimms of Rocky Mount. Other officers elected are: Brack Wilson of Smithfield, vice-president; C. C. Hole of Yanceyville, secretary; D. Wilson Uzzle of Durham, treasurer; Paul L. Abernethy of Charlotte, renamed NADA director, and Mrs. Bessie B. Ballentine of Raleigh, renamed executive secretary.

The convention attracted some 700 persons and it was voted to hold the 1949 convention in Pinehurst again.

Speakers included: Ray Chamberlain, convention manager of the National Association of Automobile Dealers, who discussed "Important Parts of Your Association;" John H. Fassitt, president of Foss-Hughes Company, Philadelphia, "Incentive Pay as It Applies to Today's and Tomorrow's Problems in the Automobile Industry;" John F. Connors, district manager, Washington Division, Ford Motor Company, "Opportunity With Challenge;" Miss Sally Woodward, public relations counsel, Flanley and Woodward, New York, "What's Your Score With Women?" Ernest Burwell of Spartanburg, S. C., "Preparing for 'C' Day;" John W. Stokes, of John Stokes and Company, New York, "How to Reduce Your Income Taxes;" John C. Metcalfe, former diplomatic correspondent for Time Magazine.

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Hydraulic
FLOOR CRANES
and Arbor Presses
RUGER EQUIPMENT CO., Inc.
2425 St. Clair Ave. Cleveland 14, Ohio
P. O. Box 3821 Portland 8, Ore.

Quality Tools for the Professional Mechanic
MAC TOOLS
Complete line of mechanics tools consisting of open end wrenches, combination wrenches, socket wrenches, and attachments, chisels, punches, pliers, hammers, screw drivers, metal boxes, drills, and other allied tools.
Serving Garage Trade in All States
Catalog Mailed on Request
THE MECHANICS TOOL & FORGE CO.
Sabina, Ohio

TRADE RESISTOFLEX MARK
flexible
GASOLINE and OIL LINES
WITH COMPAR TUBE
RESISTOFLEX CORPORATION
Belleville 9, New Jersey
PLANTS: BELLEVILLE, N. J.
ELKHART, IND., TORONTO, CANADA

MR. MECHANIC:
STA-PUT RING GROOVE TOOLS

are the best insurance you can obtain for your ring jobs!
CHARLES D. STROMGREN COMPANY
Manufacturer
935 W. 12th St., Los Angeles 15, Calif.

MILEY
BLACK GOLD
Metallized
BRAKE LININGS
are guaranteed not to score brake drums
L. J. MILEY COMPANY
18 S. Sangamon St., Chicago 7

Genuine
SERVICE
INDIANAPOLIS
"Measurably Better"
SPRINGS
SERVICE SPRING COMPANY
INDIANAPOLIS 6, INDIANA

Sweetest Profit Music EVER PLAYED

DELCO AUTO RADIOS

They're new in design! They're exclusive in features! They give dealers the "jump" over all competition!

That's how you'll size up the amazing new Delco Auto Radio line with exclusive ELECTRO-TUNER . . . biggest improvement in car radios you've seen for years. These new Delcos offer the first *truly automatic* tuning . . . no push buttons, no dial fumbling, no pre-setting of stations. Each finger-touch of the single control tunes in a new station perfectly, trapping it by electronic sensitivity. And through the elimination of push button controls, the new Delco Auto Radios fit *all* cars and trucks . . . are easily transferred from one vehicle to another.

"Tune in" on profits with the Delco Auto Radio line. And keep your eyes open to the business-boosting opportunities of *all* United Motors lines, listed below. Individually-planned sales programs, powerful merchandising helps and latest catalog information help you get started, help you grow. See your United Motors distributor now . . . or write United Motors Service direct.

A BUSINESS-BUILDING

UNITED MOTORS LINE

UNITED SERVICE MOTORS

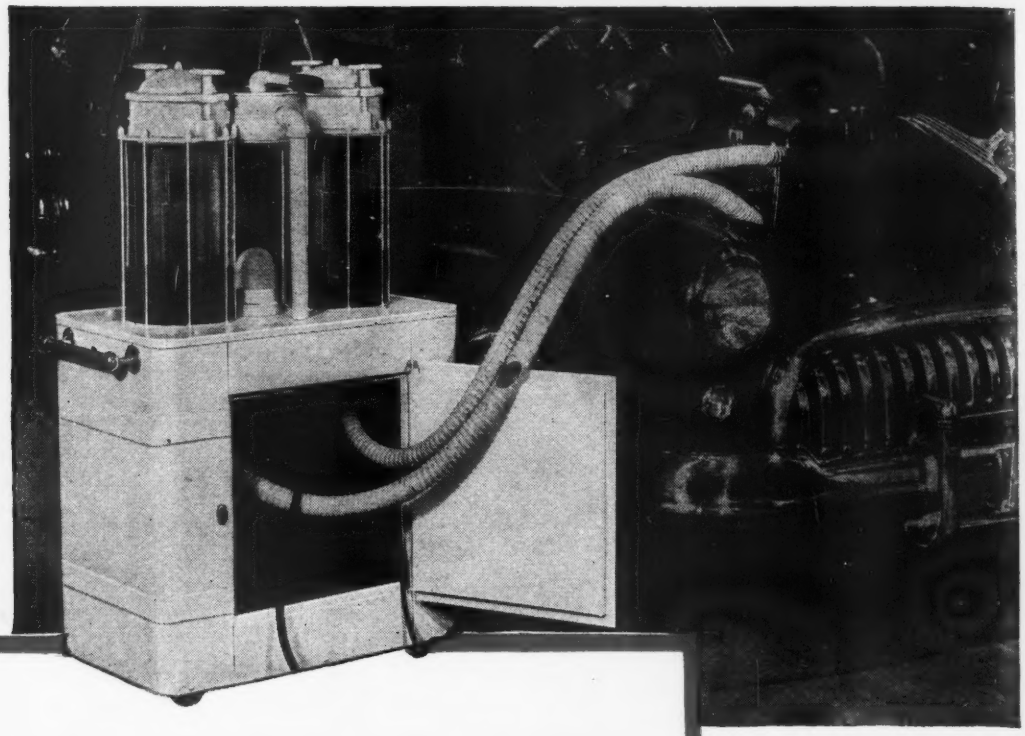
HELP AMERICA PRODUCE FOR PEACE

Turn in SCRAP Iron and Steel

UNITED MOTORS SERVICE

DIVISION OF GENERAL MOTORS CORPORATION • GENERAL MOTORS BUILDING, DETROIT 2, MICHIGAN

DELCO Batteries
AC Fuel Pumps, Gauges and Speedometers
INLITE Brake Lining
SAGINAW Jacks
DELCO Radio Parts
HYATT Roller Bearings
GUIDE Lamps
DUREX Gasoline Filters
KLAXON Horns
DELCO Home Radios
DELCO Auto Radios
DELCO Shock Absorbers
NEW DEPARTURE Ball Bearings
DELCO Hydraulic Brakes
HARRISON Radiators
HARRISON Heaters
HARRISON Thermostats
DELCO-REMY Starting, Lighting and Ignition



MAKE MONEY WITH PRESSURE - PURGER

Triple-Action Cleaning

1. Mechanical Agitation
2. Pressure Filtering
3. Pre-Heated Chemical Solution

CLEANS COOLING SYSTEMS IN ONE TEN-MINUTE OPERATION . . . .

Car Dealers, Gas Stations and Independents recognize in the CHOLDUN PRESSURE-PURGER, not only an efficient triple action cooling system cleanser — but a merchandising unit which is as important to service as a lift, a quick charger or grease equipment.

No moving parts — minimum maintenance.

Easy to operate from ordinary AC-DC shop current and air compressor.

Less than 30 minutes for complete set-up and purge.

Visible cleansing action loosens, dissolves, and filters out rust, scale, grease and grime.

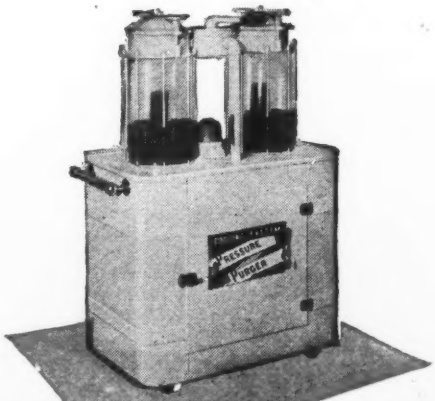
Triple-action, continuous reversing motion thoroughly cleanses radiator and motor-block water jackets.

Gleaming metal cabinet offers exceptional sales appeal.

CALL YOUR JOBBER TODAY!

PURGITE . . . the new 7 chemical Cooling System cleaning compound was developed especially for use in the CHOLDUN PRESSURE PURGER.

These chemicals act as a water softener . . . remove rust scale, lime, iron and metallic deposits. They dissolve grease tar, oil and dirt — and will not harm radiator, hose or aluminum.



Choldun MANUFACTURING CORP.

New Haven, Conn.

SALES OFFICE: 512 FIFTH AVENUE, NEW YORK 18, N. Y.

EQUIPMENT

THAT DOES EVERYTHING BUT TALK!

Cam Shaft Bearings
Connecting Rod Bearings
Main Bearings
Aluminum Pistons
Piston Pins and Bushings
Valves and Valve Guides
Valve Springs and Retainers
Water Pumps and Kits
Motor Mounts
Tie Rod Ends
Shackle Sets
King Bolt Sets
Coil Action Kits

No plant in the nation is better equipped to make precision replacement parts than Speedway. In this illustration, for example, you see a battery of automatics, superb equipment that does everything!

Hand in hand with superior machinery goes rigid inspection that simply doesn't let sloppy work slip by. *Every* Speedway part is carefully examined and re-examined before you get it. This guarantees you a line of replacement parts that you can sell with confidence . . . knowing they're *at least equal* to original equipment.

SPEEDWAY PRODUCTS CORPORATION
MANUFACTURERS OF REPLACEMENT PARTS
INDIANAPOLIS 7, INDIANA

Speedway

PRODUCTS OF PROVEN PRECISION

SHOW IT...SELL IT...PROFIT!

Saginaw RECIRCULATING-BALL BUMPER JACK

GIVES YOU EXTRA PROFIT

This revolutionary jack is piling up easy profits for dealers everywhere . . . and here are two of the many reasons:

(1) The new Saginaw Recirculating-Ball Bumper Jack is *proved* the *easiest, safest,* most *dependable* jack ever developed. It's entirely new—there's no other jack on the market like it.

(2) Today there is the *biggest demand in history* for such an easy-to-use, reliable jack.

Further, this Saginaw Recirculating-Ball Bumper Jack is simple to sell—the many advantages can be seen at a glance! Selling boils down to just this: *"Show it, you sell it . . . sell it, you profit . . . big!"*

Get your share of this easy, *extra* profit—see your United Motors distributor *today.*

THE SAFEST...EASIEST...STURDIEST BUMPER JACK EVER DEVELOPED!

. . . for extra profits, just show it to every customer

UNITED SERVICE MOTORS

Saginaw Recirculating-Ball Bumper Jacks are available through United Motors distributors. Call yours today!

Saginaw
STEERING GEAR DIVISION
General Motors Corporation, Saginaw, Michigan

PRODUCTS STEERING GEAR ASSEMBLIES • STEERING LINKAGE ASSEMBLIES • PROPELLER SHAFTS • DIESEL ENGINE AND AIRCRAFT PARTS

Dayton Rubber

MAKERS OF GREAT FAN BELTS AND PROFITS FOR JOBBERS

● **(1) a greasy fan belt, (2) a frayed fan belt, (3) bottom bright pulleys—all are signs that a fan belt is wearing out or inefficient, and a signal for you to make sales and additional profits!** Figures show that 2 out of every 3 cars on the road today have one of these symptoms of fan belt failure. So whenever you raise the hood—whether you are checking an engine for timing, installing a new water pump, or undertaking major repairs—check the 3 Points for fan belt profits . . . it's your path to greater sales!

• And for guaranteed customer satisfaction, ease in identification and inventory—be sure you are stocked with Dayton Fan Belts—original equipment *on 85% of all American makes of cars!* The Dayton line is *the simplified line*—just twelve sizes will service 91.8% of your passenger car and light truck trade! Check these profit points, and get the facts on Daytons! Call your jobber, or write DAYTON RUBBER • DAYTON, OHIO.

Now meet
the
All-New
MERCURY

The All-New 1949 Mercury

YOU'VE seen a lot of "new models." Today you can see a *car* that's new—the ALL-NEW Mercury! *All-new* in beauty, in comfort, in performance! *All-new*, inside and out, top to bottom, front to back. *All-new*, every inch and every pound.

With your very first look you'll *know* Mercury is new, all-new. From the front? Mercury is wider, with strikingly handsome grillwork, and exciting new fender treatment completely enclosed in a sleek, graceful, curved-arch silhouette. From the side? Mercury is longer and lower, with a poised-for-flight look that gives an illusion of motion even when the car is standing still. From the back? Mercury has all the luxurious styling you expect to find only in a car far above Mercury's price class!

This 1949 Mercury is a product of forward-looking, 1949-*plus* engineering. It has a big, rugged frame—with safety, stamina and down-to-earth roadability in every inch of it. There's all-new spring suspension, with a lullaby ride above it. New, *safer*, *wider* rims—with new, bigger, super-balloon tires—make shocks and side-sway a thing of the past.

There are all-new super-brakes with velvety "STOP" in 'em, and a new 8-cylinder, V-type power plant with get-up-and-"GO" in it! It's a power plant designed and built *exclusively* for Mercury. There's even a new, fog-free, leakproof "Fingertip Weather Control" to give you a controlled flow of fresh, filtered air when you want it.

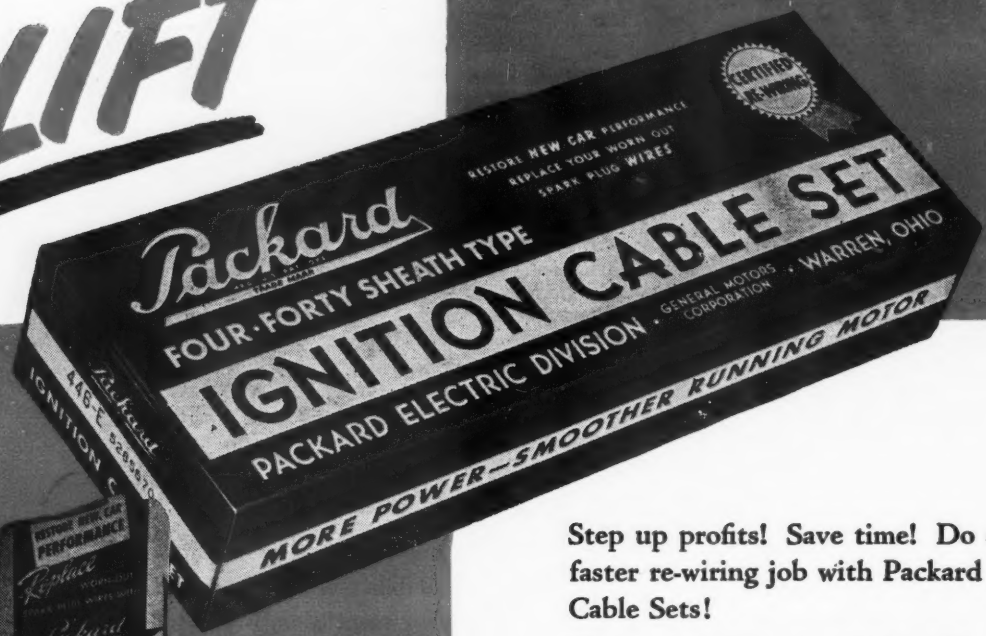
This is the ALL-NEW Mercury that's now being shown in Lincoln-Mercury dealers' showrooms—in a choice of superb body styles including Mercury's all-new *Six*-passenger Coupe and *Six*-passenger Convertible.

Not a "new model"...the All-New MERCURY

LINCOLN-MERCURY DIVISION OF FORD MOTOR COMPANY

GIVE YOUR RE-WIRING BUSINESS A *LIFT*

USE PACKARD IGNITION CABLE SETS



COUNTER DISPLAY GROUPS

No. 470 Four-Forty Cable — **No. 471** Lacquered Cable

Well-balanced assortment of 9 Packard Ignition Cable Sets provides service for majority of cars on road.

Step up profits! Save time! Do a better, faster re-wiring job with Packard Ignition Cable Sets!

These fast-moving "packages" give you spark plug wires all made up to fit popular makes of cars. There's no hunting, no fussing, no soldering, no special tools.

You'll find, too, that Packard sets are easier to stock, easier to sell. Car owners like the idea of getting a packaged set for their particular make of car.

Order Packard ignition cable sets in popular Four-Forty or lacquered cable from your Packard distributor. They'll give a lift to your re-wiring profits.

Packard
REG. U. S. PAT. OFF.
TRADE MARK

Packard Electric Division, General Motors Corporation
Warren, Ohio

HELP AMERICA PRODUCE FOR PEACE
Turn in SCRAP Iron and Steel

THERE'S MORE **MPR*** (*Miles Per Replacement) IN PACKARD CABLE

FOREMOST BUILDER OF AUTOMOTIVE AND AVIATION WIRING

You'll Specify BRADFORD TOOLS

when you check and compare - -

DESIGN
CONSTRUCTION
PERFORMANCE
PRICE

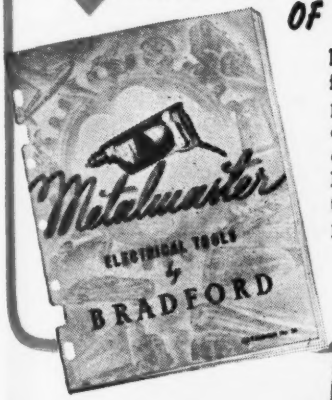
MORE AND MORE shops are finding that Bradford Tools do better work—stay on the job longer. That's because Bradford Tools are designed, engineered and constructed to meet today's work requirements with labor-saving efficiency. Skilled workmanship with top quality materials guarantees long service—yet Bradford Tools are economically priced.

Ask your nearby Bradford distributor to demonstrate those Bradford Tools that fit your job requirements. To make the most of your tool investment, remember, you'll be better equipped with Bradford Tools.

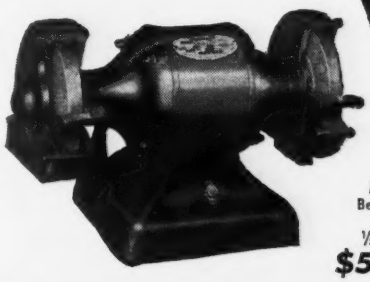
Metalmaster
Model 4B
½" Drill
$53.50

PORTABLE ELECTRIC DRILLS • SAWS
DISC SANDERS • POLISHERS • BENCH
& PEDESTAL GRINDERS • BUFFERS

WRITE FOR THIS NEW COMPLETE CATALOG OF BRADFORD ELECTRIC TOOLS



Fully illustrated. Gives complete specifications on all models of Bradford portable electric tools; bench and pedestal grinders, buffers, polishers; tool attachments and accessories. This new Bradford Catalog will help you select the tools you need for time-saving production.



Metalmaster
Bench Grinders
3 Models:
⅓ to ½ H.P.
$55.50 up

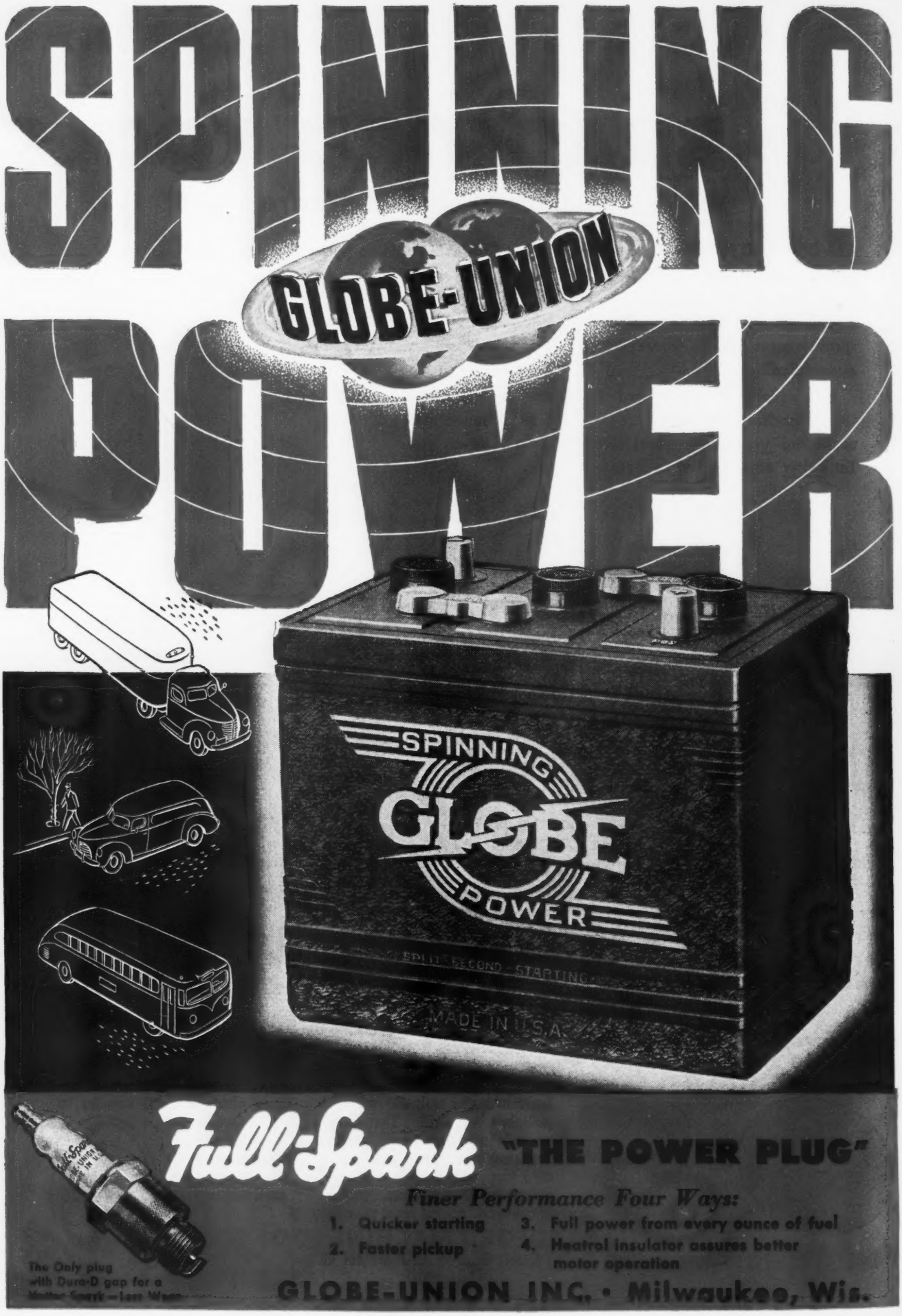
New BRADFORD Metalmaster TRIPLE TOOL $48.75

HERE'S another outstanding example of modern Bradford tool engineering. One tool with three work applications!

The TRIPLE TOOL is a 5" disc sander, polisher, and ¼" drill combined. It's light and compact, yet rugged and powerful. Design permits easy handling in any position. Push button locks spindle for quick, easy change from sander to polisher to drill. The Triple Tool comes completely furnished with sanding discs, backing pad, wool bonnet, 7B Jacobs chuck and key with holder. It's ideal for light or intermittent sanding, polishing and drilling wood, metal and plastics.

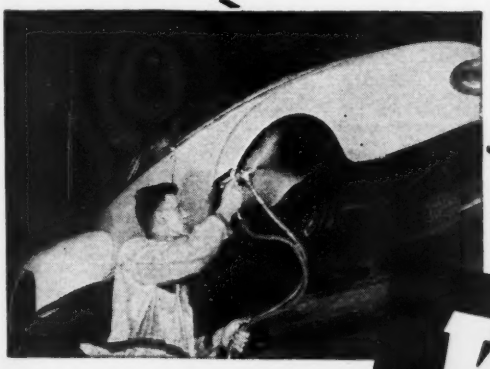
THE BRADFORD MACHINE TOOL CO.
Distributors in All Principal Cities
663 Evans Street, CINCINNATI, 4, OHIO

Precision Since 1840


SPINNING
GLOBE-UNION
POWER
SPINNING
GLOBE
POWER
SPLIT SECOND STARTING
MADE IN U.S.A.
Full-Spark
"THE POWER PLUG"
Finer Performance Four Ways:
1. Quicker starting
2. Faster pickup
3. Full power from every ounce of fuel
4. Heatrol insulator assures better motor operation
The Only plug with Dura-D gap for a Better Spark—Last Week
GLOBE-UNION INC. • Milwaukee, Wis.

Dealers Make Money by REDUCING NOISE!

Car undercoating is the most profitable *new service* that shops have been able to offer in ten years. Motorists want car undercoating because it stops vibration noise and prevents body bolts from working loose . . . also protects undercar parts and fenders against rust.



To make the *most* profit from this new service, use the material car manufacturers recommend—WITCOTE—because it is easiest to apply, dries quickest, and lasts longest. Ask your jobber.

WITCOTE

Reg. U. S. Pat. Off.

UNDERCAR PROTECTION

Stops Noise

WITCO

WITCO CHEMICAL COMPANY

435-G N. MICHIGAN AVE.
CHICAGO 11, ILL.

ESTABLISHED
1920

OFFICES IN
PRINCIPAL CITIES

the new look in seat cover fabrics

Textilene Sunsure®

We do not make automobile seat covers, but we supply good-looking, fibre fabrics to two hundred or more of the firms that do. You'll see thousands of these bright, colorful seat covers on the new 1948 cars (and on older models, of course). The TEXTILENE SUNSURE label is your signpost to colors that stay bright . . . fabrics that are easy to slide over . . . fabrics that don't snag stockings. These TEXTILENE SUNSURE fabrics are vinyl-coated, too, covered by tough resins that give extra wear. Look for that TEXTILENE SUNSURE label on the seat covers you buy. They're sold by leading automotive suppliers, car dealers, and department stores. E. W. TWITCHELL, INC., Third and Somerset Streets, Philadelphia 33, Pennsylvania.

Say SUNSURE—to be sure

№ 9 IN THE SATURDAY EVENING POST

Again . . . and again . . . and again . . . regular monthly advertisements like this are appearing in the *Saturday Evening Post* for TEXTILENE SUNSURE fabrics.

They're carrying the news of America's most popular seat cover materials to 16,000,000 people. They're telling hundreds of thousands of your customers to look for the TEXTILENE SUNSURE label when shopping for automobile seat covers.

We'll be glad to send you the names of over 200 manufacturers who can supply you with seat covers made of TEXTILENE SUNSURE fabrics. For fast turnover . . . for satisfied customers . . . specify TEXTILENE SUNSURE when you order . . . and look for that TEXTILENE SUNSURE label. E. W. TWITCHELL, INC., Third & Somerset Streets, Philadelphia 33, Pa.

Twitchell makes twisted, folded, pressed, crushed, shaped, braided and woven paper products for industry.

Tie-in your SALES EFFORT with Wagner HALF-PAGE COLOR ADS IN POST and Collier's

27,000,000 messages *help you sell*

LOCKHEED HYDRAULIC BRAKE PARTS
LOCKHEED HYDRAULIC BRAKE FLUID
CoMaX BRAKE LINING

Repeated two-color half-page advertisements in Saturday Evening Post and Collier's bring pay-off in consumer recognition. Wagner *is* foremost in brake service advertising...and that means business for service shops displaying the famous Wagner Service Sign.

A small stock of Wagner Lockheed Hydraulic Brake Parts and Fluid and CoMaX Brake Lining puts you in a position to benefit directly from such national advertisements as the one illustrated in miniature at the right. See your Wagner jobber or write to

Wagner Electric Corporation
6498 PLYMOUTH AVE., ST. LOUIS, 14, MO., U. S. A.

EVERY REPAIRMAN NEEDS . . . Bulletins HU-17G and HU-197...Tips for better Brake Service—free on request

NEW "SUPERSOCKET" SETS BY WILLIAMS

"SUPERCHEST" 2001
146 PIECES

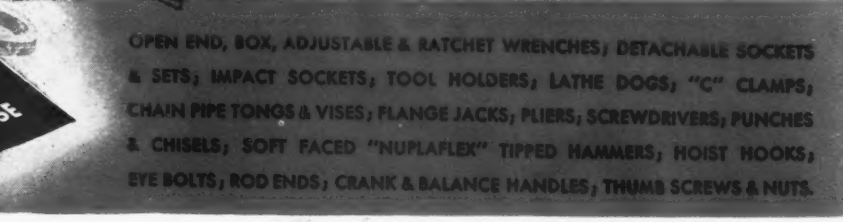
51 Sockets • 37 Attachments
58 Wrenches Complete in metal chest with handy tote tray. Openings: 3/16" to 1-5/8"
Drives: 1/4, 3/8, 1/2 and 3/4"

35 SCIENTIFICALLY SELECTED SETS FOR EVERY TYPE OF SERVICE

● This new Williams line consists of 35 scientifically matched assortments of various types and sizes of tools, carefully selected and grouped for specific uses. "Supersockets," "Superrenches," pliers, chisels, screw drivers, etc. are included in these many versatile collections.

There are "Supersocket" Sets in 1/4, 3/8, 1/2, 3/4 and 1" drives with socket openings from 3/16" to 2-3/8". The heavy-gauge steel cases are attractively finished in orange and black.

Williams "Superchests" feature removable tote tray, drawers on free action suspension slides and cylinder locks. All cases have convenient compartments that keep sockets at finger tip height. These new sets offer the maximum in convenience, utility and value.



WILLIAMS

• OUR DISTRIBUTOR IS YOUR LOCAL WAREHOUSE

OPEN END, BOX, ADJUSTABLE & RATCHET WRENCHES; DETACHABLE SOCKETS & SETS; IMPACT SOCKETS; TOOL HOLDERS; LATHE DOGS; "C" CLAMPS; CHAIN PIPE TONGS & VISES; FLANGE JACKS; PLIERS; SCREWDRIVERS; PUNCHES & CHISELS; SOFT FACED "NUPLAFLEX" TIPPED HAMMERS; HOIST HOOKS; EYE BOLTS; ROD ENDS; CRANK & BALANCE HANDLES; THUMB SCREWS & NUTS.

J. H. WILLIAMS & CO., BUFFALO 7, N. Y. *Distributors Everywhere*

WANTED
BY MILLIONS OF MOTORISTS

FITS and MATCHES 95% of all cars—old or new

For comfort . . . for safety . . . for beauty . . . the New *Motorola Karvisor* of rugged Aero Metal Aluminum fulfills a real need in modern driving! Karvisor cuts out blinding sun glare and reflections from cowl and hood . . . reduces driving strain on long trips. Karvisor keeps cars cooler in hot weather by shutting off sun's rays. Smart-looking, too, Karvisor's modern dihedral design complements today's streamlined cars . . . scientifically channels air currents in a smooth, silent stream over its streamlined surface. Your customers want the Motorola Karvisor now—so order now—for profit *now*.

THIRTY MILLION CUSTOMERS

PASSENGER CARS

TAXICABS

TRUCKS

By the end of this year, you'll have an estimated market of approximately 30 million cars that can be fitted with the Karvisor. The Karvisor can easily be installed by anyone in fifteen minutes or less. No holes to drill, no special tools necessary. One size fits 95% of all old and new cars—is fully adjustable to suit the individual need. Individually packaged.

A powerful stimulant for your accessory business, the enormous Karvisor market is getting bigger and better every day!

ASK YOUR *Motorola* DISTRIBUTOR

Another CRESCENT First

Attractive, Sturdy, complete

STOCK-DISPLAY

now available for the first time

- Keeps wire, cable and ignition sets in order and in one place.
- Keeps stock in perfect condition—prevents waste.
- Displays and advertises merchandise.
- Hangs on wall or stands on counter.
- Supplied as a complete department—*including stock.*

✓Check the wire on every job!

THE CRESCENT COMPANY, INC.

PAWTUCKET, RHODE ISLAND

WHEN NEXT IN OUR NEIGHBORHOOD, DROP IN, SEE HOW CRESCENT WIRY JOE AUTOMOTIVE CABLE IS MADE FROM COPPER TO FINISHED PRODUCT IN ONE PLANT UNDER ONE ROOF

SPANNING **ALL** YOUR HAND TOOL REQUIREMENTS!

This fine Hand Tool Assortment — the 106-piece SUPER SERVICE SET by New Britain — offers you all the Tools for every standard job in the shop. You'll find famous New Britain Sockets, in 3/8", 1/2" and 3/4" drive, plus a full collection of sturdy Drive Parts. You'll find Flat Wrenches, Pliers, Screw Drivers, Hammers, Chisels, Punches... every basic Hand Tool for day-to-day needs, plus many Tools designed for specialized automotive service! And each Tool is a revelation in tough, time-saving utility!... picked with care to make this Set a balanced, hard-working team... your workshop in a box! Ask your NAPA Jobber about this superb Set... TODAY! The New Britain Machine Co., New Britain, Conn.

NAPA National Automotive Parts Association — Assurance of Quality

New Britain

GREATER STRENGTH · BETTER FIT HAND TOOLS

Everyone Profits When Y

THIS PANEL

INVEST IN CARE-FREE DRIVING

Plan a "Summer Safety Check-Up" today

Too few people realize that highway casualties in 1946 and again in 1947 were greater than our casualties of war from Pearl Harbor to V-J Day.

Too large a percentage of these accidents were caused by mechanical breakdowns that regular preventive service could have avoided. For your sake, for your family's sake, have your car given this minimum 5-way check-up now—

- PULL WHEELS—INSPECT BRAKE LININGS
- CHECK BRAKE-FLUID LINES
- CHECK STEERING AND WHEEL ALIGNMENT
- HAVE TIRES INSPECTED
- CHECK VISIBILITY—LIGHTS, WINDSHIELD WIPERS

A "Summer Safety Check-Up" is particularly important. A peak of automobile accidents is reached in July and August. The driving risk is greater in summer because the highways are more crowded and cars are driven farther and faster.

The terrible toll of summer accidents—and the number of roadside breakdowns—can and should be reduced. Your service man is equipped to make a quick, efficient and economical "Summer Safety Check-Up" on your car.

Don't gamble with safety.

P.S. Preventive Service for Motor Car Owners

Sponsored by Collier's For Pleasant Safe Driving

This panel is part of the Collier's article on Safety which appears just before the 4th of July weekend.

It will dramatically remind millions of car owners from coast to coast of the urgent need for a Summer Safety Check-up.

You Sell *Safety*

THIS BANNER

This banner is part of a tie-in kit that will help you profit on the five safety jobs that Collier's has wrapped up into one package for you to sell this summer.

It's your opportunity to help your *customers* . . . help your *community* . . . help *yourself*.

Don't miss this chance to capitalize on the tremendous demand for parts and service that this Collier's P. S. Safety Promotion will develop.

Be sure to get a copy of Collier's, issue of July 10th . . . on the newsstands July 2nd . . . and show your customers the safety story.

Write today for complete information on the best way to tie in with the Collier's P. S. Safety Service Program.

WRITE TO

Collier's

Promotion Dept.; 250 Park Ave., New York 17, N. Y.

ANNOUNCING

dgf 123

FOR PRE-LUBRICATION*

A PROTECTIVE ARMOR OF DRY GRAPHITE FILM LUBRICANT*

NOW—"run-in" periods for new and rebuilt engines cut to less than two-thirds.

NOW—"standby" lubrication which protects vital parts from the first turn of the engine until a complete oil film is established.

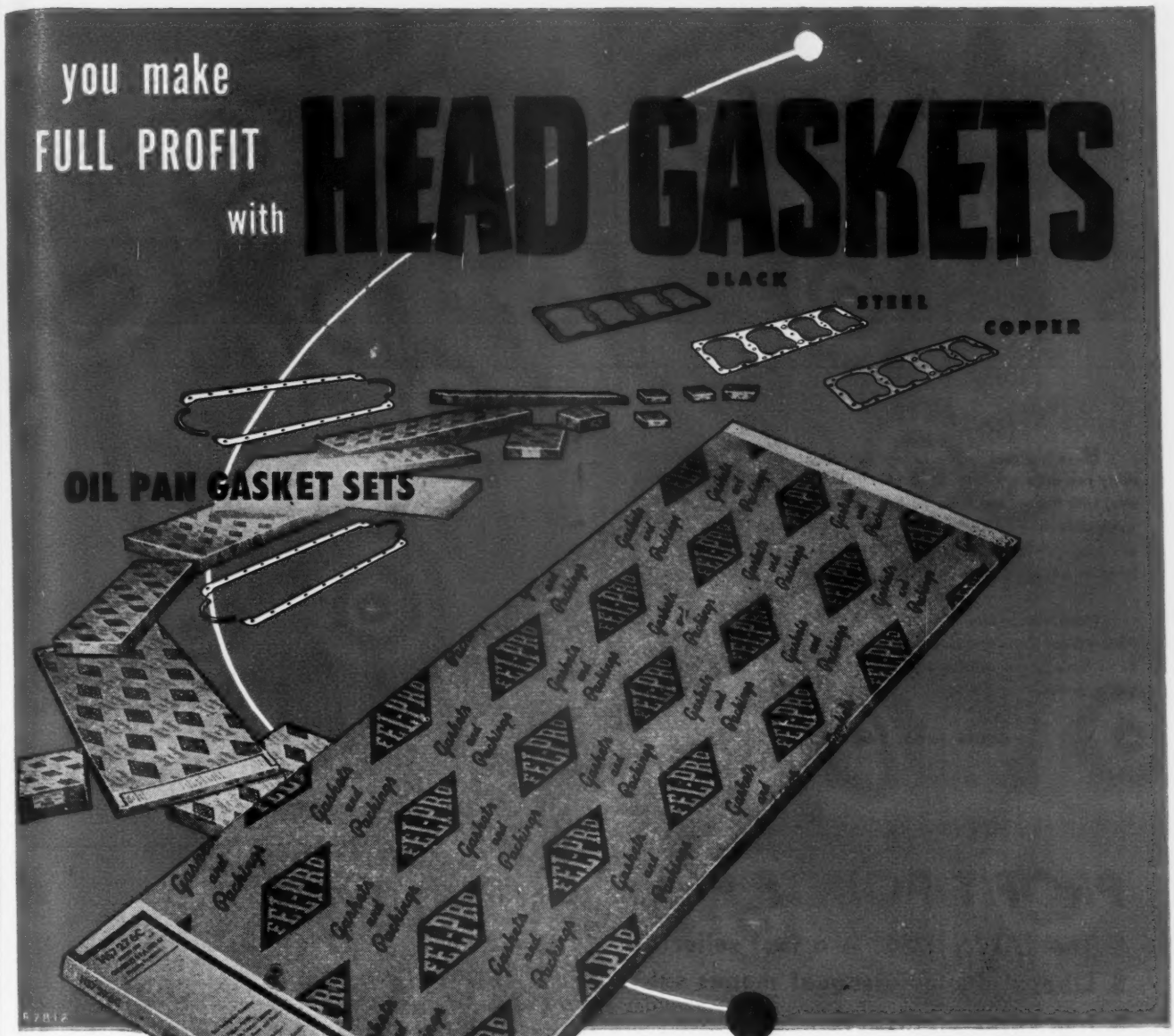
Use of dgf-123 assures: ● Reduced Frictional HP Loss; ● Close Tolerances ● Protection during temporary oil failures; ● Lower Operating Temperatures of Bearings; ● Less Oil Consumption; ● Shorter "run-in" periods; ● Smoother Bearing and Rubbing Surfaces; ● Less Corrossion of Cylinders and Rings; ● Reduced Costs in Maintenance, and, ● Longer Engine Service Life.

SOLD IN:
8-OUNCE
½-GALLON
1-GALLON
5-GALLON
CONTAINERS

Bring your lubrication problems to Our Technical Department. dgf-123 and Miracle Power serves many uses.

THE AP PARTS CORPORATION ★ TOLEDO 1. OHIO

MANUFACTURERS OF THE FAMOUS AP "MILEAGE GETTING" MUFFLERS AND PIPES



by FEL-PRO

INDIVIDUALLY OR IN FULL SETS

When you install Fel-Pro Head Gaskets you can match original head gasket equipment or use your special favorite, be it black, steel or copper. They are also available in Valve Grinding Sets and Full Gasket Sets. They are precision made to highest specifications. You get original equipment precision and quality. That means your work is sure to satisfy your customers and build your business. That's FULL profit! Fel-Pro has everything else you want in gaskets, Oil Pan Gasket Sets, Full Gasket Sets, Packings and Grease Retainers. Better start standardizing on Fel-Pro now.

STOP every "DRIP" and keep him stopped use FEL-PRO!

NEW "Quick-Reference" Gasket Catalog. Get Yours—FREE!
Real help for busy men! New "Quick-Reference" Catalog lists all gaskets and sets for all popular cars and trucks. Tear out, mail coupon now, while you're thinking about it.

FELT PRODUCTS MFG. CO.
1521 Carroll Ave., Chicago 7, Ill.
Gentlemen: Please send me, without cost or obligation, copy of the new "Quick-Reference" Gasket Catalog.

My Name _____
Address _____
City _____ State _____

FEL-PRO tect FULL GASKET SETS, PACKINGS, GREASE RETAINERS

30th ANNIVERSARY YEAR

FELT PRODUCTS MFG. CO., CHICAGO, ILL.

Handy Chart To Service . . .

OVERSIZE

REAR WHEEL STUDS

Here is a real service help — an attractive wall chart showing thirty-two different oversize and standard rear wheel studs in actual size, with figures showing length, diameter, and parts number for quick comparison and ordering. Every shop servicing trucks, buses, and tractors will want a copy — mailed free upon request on your letter or bill head — ask for chart No. 450.

Champ-Items No. 407 Series of Oversize and Standard Rear Wheel Studs and No. 500 Series Rear Axle Stud Locking Rings have given satisfactory results to truck operators the world over.

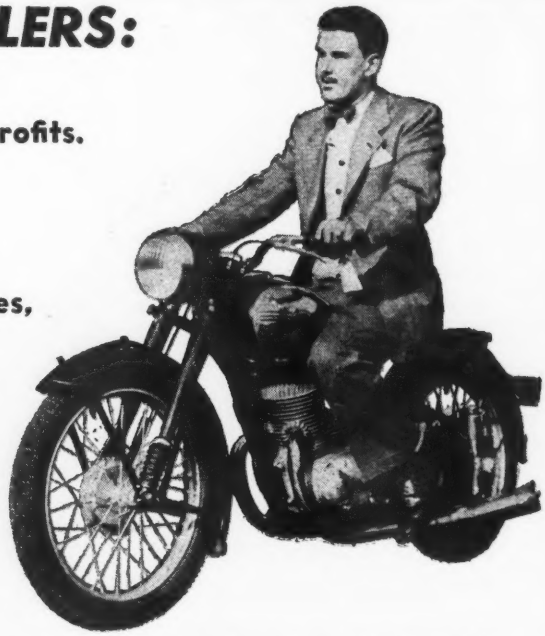
ORDER FROM YOUR JOBBER

RE-CONDITIONING CHAMP-ITEMS INC. SHORT CUTS

CHAMP-ITEMS, INC. 6191 Maple Ave. St. Louis 14, Mo.

PROFIT POINTS FOR DEALERS:

- **$ The JAWA "250" is a fast seller.**
- **$ Liberal dealer discount means substantial profits.**
- **$ Immediate delivery.**
- **$ Liberal franchise terms.**
- **$ Extra income from JAWA servicing.**
- **$ Additional profits on replacement parts sales,**
- **$ Backed by extensive promotion—local, national and point of sale.**



GOING PLACES!!
...with sales and profits

CASH IN ON THE MOTORCYCLE BUYING SEASON JUST AHEAD! If you are interested in a Dealer franchise in your community write us for complete information on the JAWA "250" and your profit-making possibilities as an authorized JAWA Dealer.

The entirely new streamlined JAWA "250" is light in weight but packed with power. Its superior design gives the maximum in riding pleasure at minimum operating expense. For business or pleasure the JAWA "250" is truly the Motorcycle of Tomorrow.

JAWA

JAWA MOTORCYCLE COMPANY

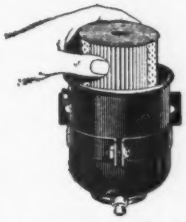
DIVISION OF INDUSTRIAL OPERATIONS, INC.

460 FOURTH AVE., Dept. ? ?, NEW YORK 16, N. Y.

the modern plastic filter
that replaces the cotton-waste filter

Car owners everywhere are demanding this revolutionary oil filter. Make sure you take advantage of this demand by pushing Purolator *Micronic* Oil Filters. Cash in on this greatest oil filter development which replaces the cotton waste filter.

The sensational new Purolator *Micronic* Oil Filter was originally designed, developed and tested by Purolator engineers. The results of test after test were so amazing that our engineers knew at last they had developed a filtering material that proved superior to our cotton waste.

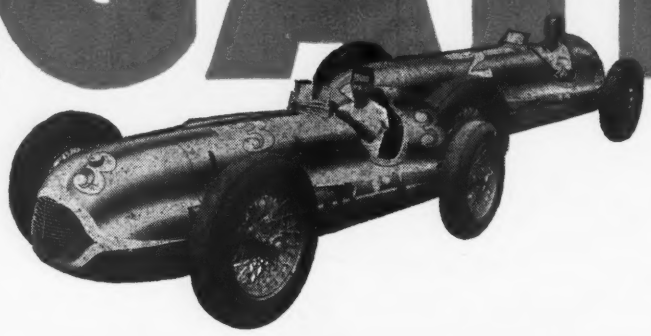


The new Purolator *Micronic* Filter employs a plastic filtering material which operates efficiently with mineral or additive oils. The special accordion pleated design provides 8 times more filtering area and, in fact, will trap 200% more dirt, dust, grime and abrasives than the old style cotton-waste type filter. This sensational filter is heat-proof, warp-proof, waterproof, and unaffected by crankcase acids. Only Purolator makes the Purolator *Micronic* Oil Filter.

25 PUROLATOR YEARS 1923-1948

PUROLATOR PRODUCTS, INC., NEWARK 2, NEW JERSEY, AND WINDSOR, ONTARIO, CANADA

BURD DOES IT AGAIN



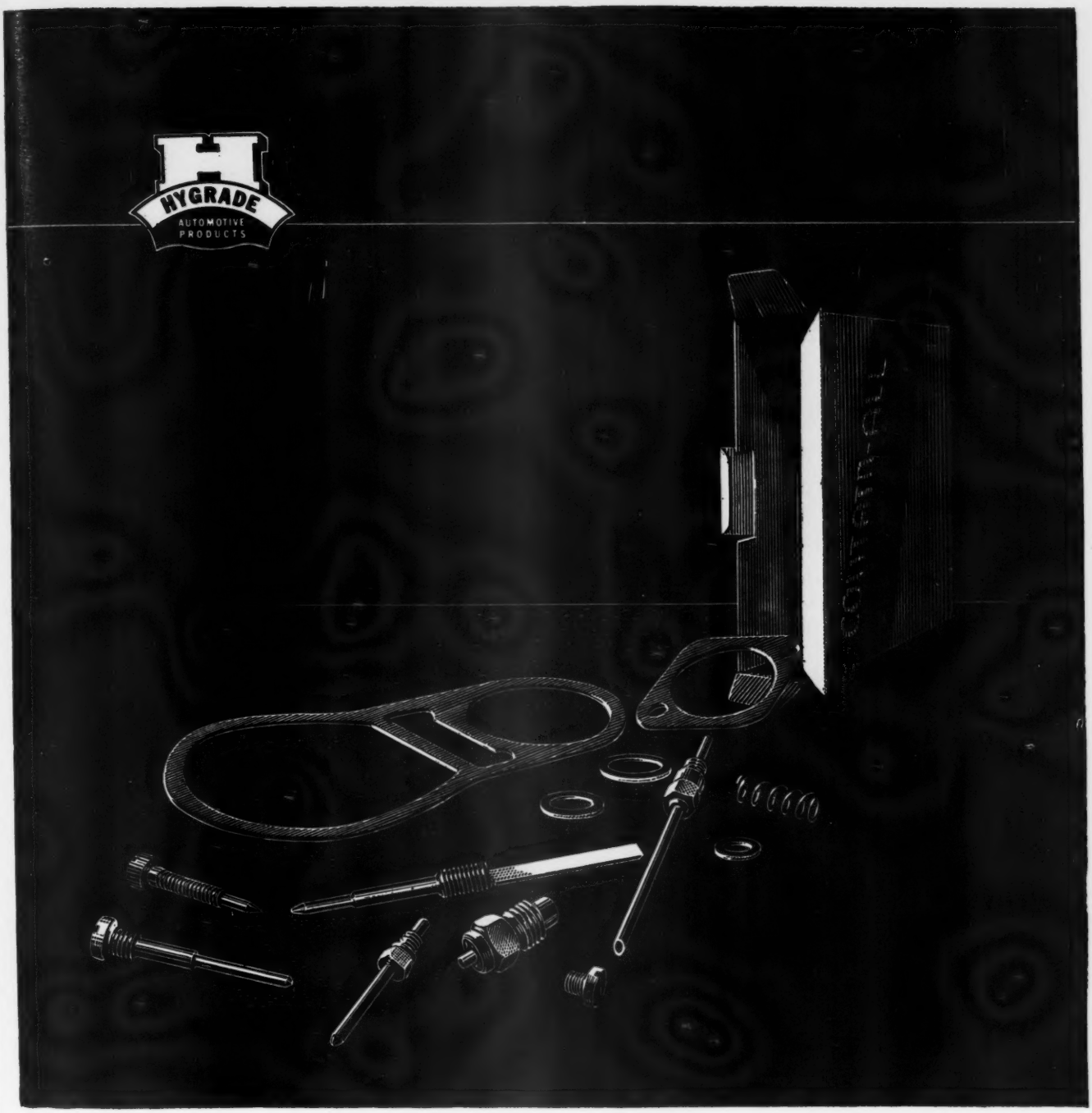
MAURI ROSE AND BILL HOLLAND REPEAT SENSATIONAL ONE-TWO FINISH AT INDIANAPOLIS

● Against the greatest odds in racing history . . . competing in the fastest field ever assembled for the world-famous 500-Mile Classic, in the only two Burd Piston Ring-equipped cars among the 33 starters . . . Rose and Holland did the "impossible," finished first and second for the second year in a row in Lou Moore's unbeaten twins. But winning wasn't enough . . . both men broke the all-time race record of 117.2 m.p.h. (a mark set in 1938 by Floyd Roberts driving Moore's Burd Piston Ring Special) to establish a blistering 119.8 m.p.h. average. What's more, Holland used the same set of *stock* Burd Piston Rings* that were in his car in 1947. Burd now has built up an amazing record of consistency . . . has posted 5 victories in the last 8 Indianapolis Races. You can't beat Burd Piston Rings for performance in *ANY* engine.

*Burd Piston Rings used in Rose's car were removed for laboratory analysis after the 1947 Race.

BURD
GRAF-FLOX
PISTON RINGS

BURD PISTON RING COMPANY • ROCKFORD, ILLINOIS



A repair shop without Hygrade Carburetor Contain-All Kits on hand is like a serviceman without a wrench. You can take a carburetor that's on the blink and, with a Contain-All Kit, revamp it to look and act like new. No time wasted—everything you need is in this one complete Hygrade unit.

Every single part is tooled on the plus side—engineered for replacement. With carburetors that have seen service for a long time, you need that extra precision. Put in a supply of Hygrade Contain-All Kits. They pay dividends in satisfied customers and more profits for you . . . They're reputation builders.

Buy Hygrade...better made...better for your business

FUEL PUMPS ○○○ FUEL FILTERS ○○○ FUEL PUMP KITS AND PARTS ○○○ CARBURETOR KITS AND PARTS

HYGRADE DIVISION ○ STANDARD MOTOR PRODUCTS, INC. ○ 35-35 THIRTY-FIFTH STREET, LONG ISLAND CITY 1, N. Y.

PICTURE QUIZ: Which of these five people gives the right reason for buying U.S. Bonds?

(ANSWER BELOW)

1. **Easy to save!** "I'm putting my money into U. S. Bonds because it's the *easiest way* for me to save. Under the Payroll Savings Plan, I put aside a regular amount each week for Bonds. So far, I've saved $500 without missing the money!"

2. **Good investment!** "Getting back $4 for every $3 I invest—the way I will in ten years' time with U. S. Bonds—is my idea of a *good investment.* I know it's safe and sound, too, because it's backed by Uncle Sam. Buy Bonds, I say."

3. **Plans for the future!** "Ten years from now, the money I'll get for my U.S. Bonds will help to send my kids to college, or buy our family a new home. I think that buying U. S. Bonds is the wisest thing a family man can do."

4. **Fights inflation!** "I want America to stay economically sound. That's why I'm putting all our extra dollars into U. S. Bonds. It's like buying a share in our country's future prosperity!"

5. **Rainy day!** "Maybe a rainy day's coming for me. Maybe it isn't. But I am taking no chances. That's why I'm buying all the U. S. Bonds I can through my Payroll Savings Plan."

THE ANSWER

Every one of these people gives the "right" reason—because there's more than one right reason for buying U. S. Bonds.

Whichever way you buy them—through Payroll Savings, or your local bank or post office—U.S. Bonds are the best investment you can make!

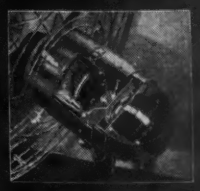
Save the easy way.. buy your bonds through payroll savings

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

A PUBLIC SERVICE PROJECT — The Advertising Council

FRESH'ND-AIRE

"Successor to the fan"



CUSTOM-BUILT FRESH'ND-AIRE MOTOR . . . precision engineered for a life-time of quiet, current-saving power.

FEATHER-LIGHT PLASTIC PROPELLER . . . advanced aviation principles move more air, more quietly, more efficiently.

Out-performs and out-lasts any other air circulator on the market

Without ever causing blasts or drafts, Fresh-'nd-Aire does all this: *completely circulates air, expels stale and overheated air, disperses fumes, boosts air-conditioning circulation,* and *cuts heating costs* in thousands of the world's best known stores, factories, offices, hotels and restaurants.

Its noise level is so low that it's the only circulator permitted inside many radio broadcasting studios and telephone exchanges.

Fresh'nd-Aire adds to everyone's comfort, increases worker efficiency. *And there's a Fresh'nd-Aire Circulator to fit every need!* Write for information and name of your nearest suppliers.

FRESH'ND-AIRE *Air Circulator*

Products of FRESH'ND-AIRE COMPANY
A Division of CORY CORP. • 221 N. LaSalle St., Chicago 1, Ill.
Export Sales: The A. J. Alsdorf Corp., Chicago, Ill.

LOOK

how scientific cleaning through pH control

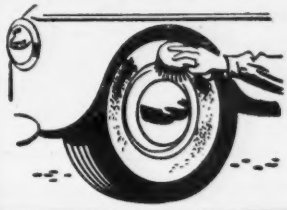
SAVES TIME, WORK, MONEY

1. Fast Parts Cleaning

Kelite Formula 555 cleans all auto parts with miraculous speed . . . yet is safe from fire—safe for all metals—safe for the skin.

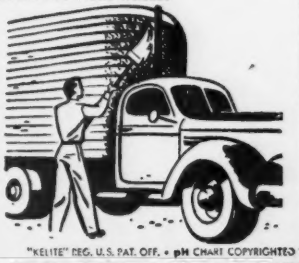
2. Easy to Clean Side Walls

Just a swish with a wheel brush dipped in KDL No. 28, and white side walls come white again. No need to waste time with pastes.



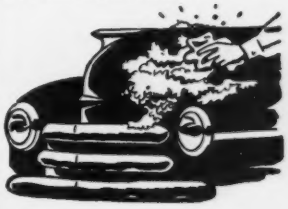
3. Cleans Tough Diesel Jobs

Kelite Formula 99 makes short work of diesel fumes and surface dirt on diesel buses, trucks, trailers and engines. Just apply with brush and rinse with water.



4. Quicker Better Car Wash

No need to chamois body when you wash car with Kelite Super Foam. Removes road haze and maintains lustre. Rinses free with no-water-break surface.



"KELITE" REG. U.S. PAT. OFF. • pH CHART COPYRIGHTED 1942 BY KELITE PRODUCTS, INC.

KELITE SCIENTIFIC CLEANING THROUGH pH CONTROL

KELITE pH Control

Industrial Chemicals for Cleaning & Processing • Manufacturing Plants in Los Angeles, Chicago, Dallas • Offices in principal cities

FREE SAMPLES—DEMONSTRATIONS

See for yourself how these and other Kelite Cleaning Materials can do a better job for you. No cost or obligation. Just send coupon.

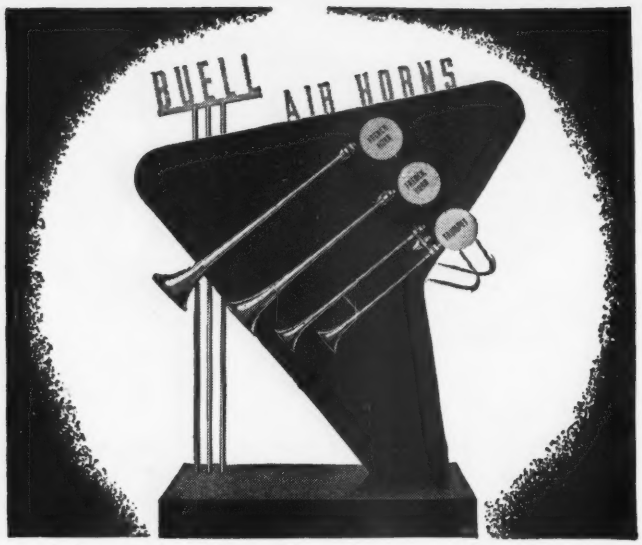
KELITE PRODUCTS, INC.
P.O. BOX 2917 — TERMINAL ANNEX, LOS ANGELES 54, CALIF.

I am interested in free ☐ SAMPLE ☐ DEMONSTRATION

for:

Automotive Parts Cleaner ☐
Cleaning White Sidewalls ☐
Diesel Cleaning ☐
Washing Cars & Trucks ☐
Other _____ ☐

Name _____
Company _____
Street _____ City _____



BUELL MERCHANDISER

Brings Big Dealer Profits

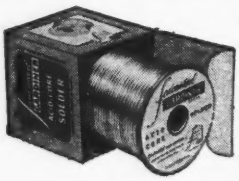
Up to $30 profit on each set of Buell Air Horns. Let the "Buell Merchandiser" be your salesman. Prospects sell themselves on sight.

The merchandise—and your sales—are both *guaranteed*. Write for deposit price, guaranteed sales plan, and sales results of other dealers.

BUELL MANUFACTURING CO.
2991 So. Cottage Grove Ave., Chicago 16, Illinois

Join with GARDINER Solder!

BRAND



Federated Gardiner Brand ACID CORE SOLDER is scientifically alloyed from the purest metals, resulting in a precise composition which will give strong, lasting bonds. For automotive and general work. Comes in 1 lb. & 5 lb. spools.

Federated
METALS DIVISION
AMERICAN SMELTING & REFINING COMPANY
WHITING, INDIANA (CHICAGO)

Federated first in the non-ferrous field FMD

CHECK SPRING TENSION!

A PERFECT valve grinding job can't give efficient engine performance unless all valve springs function properly.

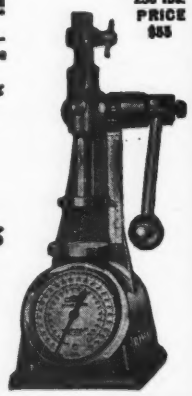
Insure every motor overhaul job by checking spring tension with

RIMAC
SPRING TESTER
For VALVE and CLUTCH SPRINGS

Used in production and recommended for service work by leading manufacturers of automobile, airplane, truck and tractor motors.

RINCK-McILWAINE, INC.
16 Hudson Street, New York 13

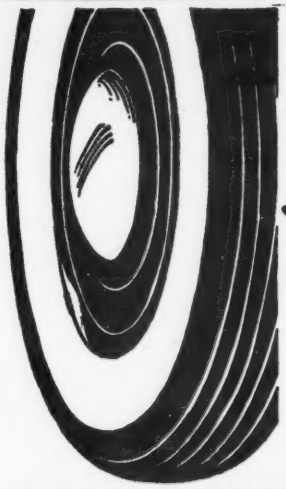
Range up to 250 lbs.
PRICE $85



GATKE
DURA-BLOK GROOVED
gives you
PLENTY EXTRA

Non-grabbing action. Quick elimination of extraneous matter. Clean braking surfaces. Uniform contact. Quiet operation. Ask your GATKE Jobber or write for particulars.

GATKE CORPORATION 236 N. La Salle St., Chicago 1



SNUGL
FAD-A-WAY
AUTOMOTIVE
WHEEL BALANCE WEIGHTS

TRUCKS • BUSES • PASS. CARS

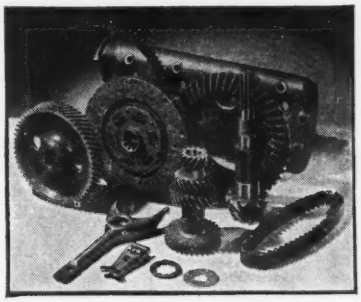
PAT. NO. D-119-321, D-5188, 2,696,757

MID-WESTERN AUTO PARTS
FACTORY
824 E. Elm Kokomo, Indiana

BRANCH:
738 S. GREENLEAF
WHITTIER, CALIF.

THE MARK OF PERFECTION CERTIFIED PARTS

PERFECTION PARTS
are
Certified to excel



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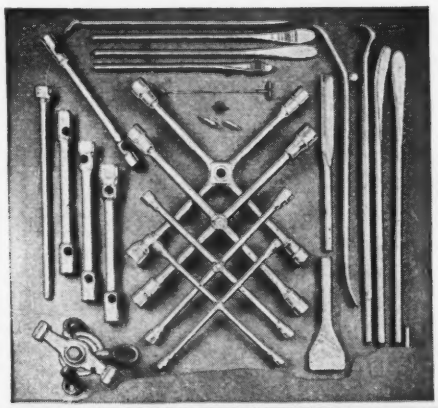

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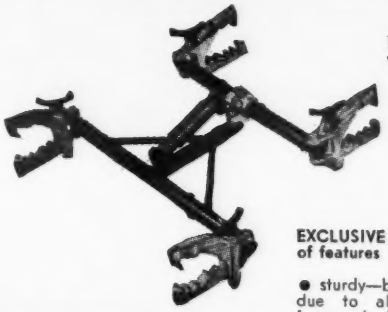

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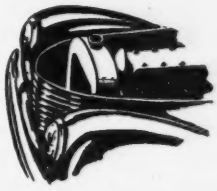

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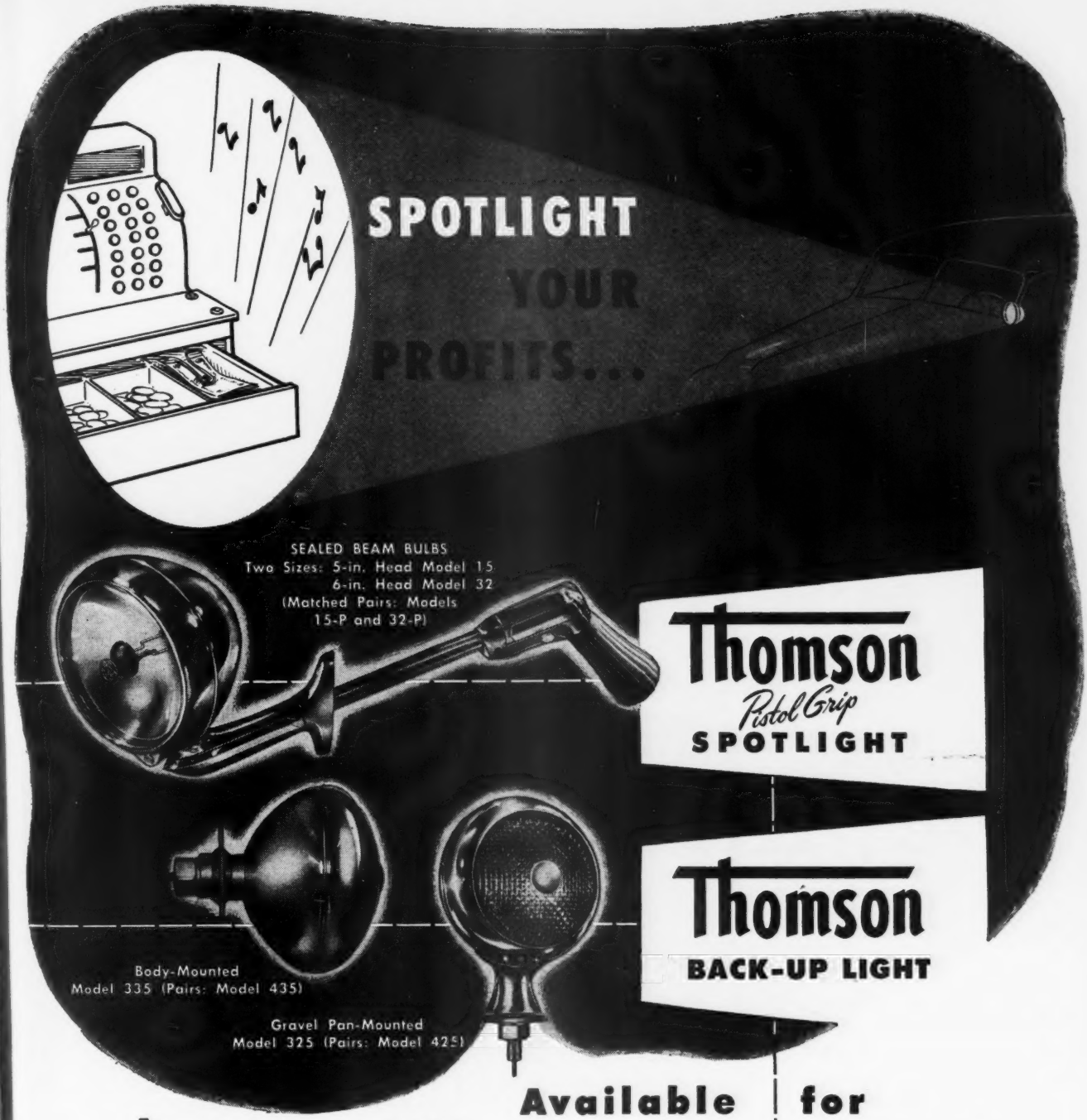

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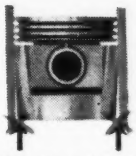

"X" marks point of collapse. CORRECT it where it has happened, PREVENT it where it hasn't.

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without Fuss or Fitting

Ramco Piston Stabilizers re-size and re-shape by exerting pressure only where collapse occurs—at right angles to the wrist pin (see drawing above). They take an unnecessary load away from the rings, they stop piston slap, they insure a longer-lasting, trouble-free job. Available for cast-iron, steel, semi-steel or aluminum pistons, car and truck.

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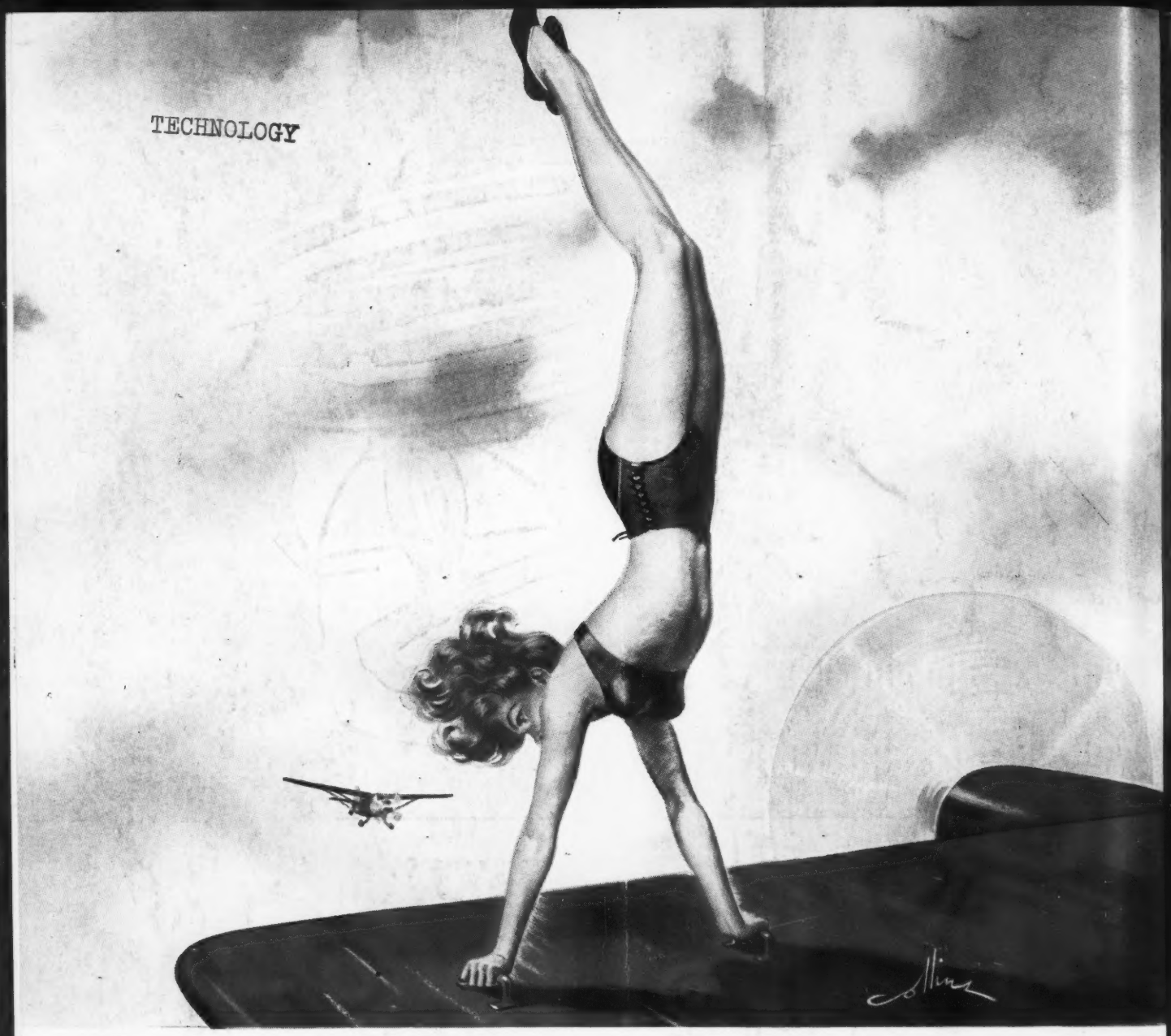

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